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ABSTRACT

Presented is the final report of a project which investigated the current status of 1711 Anglo, Black, and Spanish-surnamed California educable mentally retarded (EMR) students reassessed by court order in 1969-72. It is explained that Ss were matched on sex and ethnicity with regular class and non-decertified EMR students. Attempts to identify differences at EMR placement of those later decertified vs. those not are said to have produced no results, forcing a conclusion of educational equivalence at that time. It is noted that regular class means on current Metropolitan Achievement Test scores were highest, EMR lowest, but regular class and decertified distributions greatly overlapped; both were several grade levels below nominal placement. Among results reported are little ethnic difference and little difference between regular class and decertified Ss on teacher ratings of citizenship and achievement, and the same broad range in social acceptance and adjustment for decertified Ss as regular class matches on teacher questionnaire responses (both means tending to be under average for their classes). It is concluded that while decertification did not make the students average, the students nevertheless tended to succeed nearly as well as regular class matches. (Author/CL)

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Final Report

Grant No. OEG 0-73-5263

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CORRELATES OF SUCCESS IN TRANSITION OF MR TO REGULAR CLASS

November 1975

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

Bureau of Education for the Handicapped

ABSTRACT

The project investigated the current status of California EMR students reassessed by court order in 1969-72, of whom over 11,000 returned to regular (mostly slow-track) class. Most received transition help, aides or resource teachers. Sampled in 12 representative districts were Anglo, Black, and Spanish-surnamed decertified students matched on sex and ethnicity with regular class and non-decertified EMR cases. Attempts to identify differences at EMR placement of those later decertified vs. those not produced no results, forcing a conclusion of educational equivalence at that time. On current MAT achievement, regular class means were highest, EMR lowest, but regular class and decertified distributions greatly overlapped; both were several grade levels below nominal placement. Teacher marks of achievement and citizenship showed females higher, especially among Blacks, with little ethnic difference and little difference between regular class and decertified. Teacher questionnaire results showed most (59%) experienced no special problems, reporting the decertified to have the same broad range in social acceptance and adjustment as regular class matches, both means tending to be under average for their classes. It was concluded that while decertification did not make the students average, the students nevertheless tended to succeed nearly as well as regular class match cases.

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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CHAPTER I

Preface and Overview

This document is the final report to the Bureau of the Education of the Handicapped of the project, OEG-0-73-526[illegible], "Correlates of Success in Transition of EMR to Regular Class." The report itself is followed by an extensive appendix, containing the manifold forms developed for specific procedures of the project; brief handouts or longer papers prepared for presentation to such groups as the Council on Exceptional Children and the American Association on Mental Deficiency, other speeches and papers, manuscripts prepared for journal submission, either in press or in editorial consideration, and other material. Future reports are presently anticipated following the completion of this major document. Interested persons might contact one of the authors for information about these. They will be concerned with spin-off type of analyses of data not germane to the main thrust of the project.

Material and concepts developed in and from this project have thus far been presented in a more or less formal way in at least six conferences or conventions to date, together with incidental presentations via workshops, public addresses, and the like. It is hoped this final report will satisfy most of the curiosity of those who have inquired about the project, its procedures and its determinations.

Structure of this report. The Table of Contents gives the chapter breakdown. Chapter II is a review of the problem and the literature while III takes up the specific logic and purpose of the project itself. Chapter IV presents the design. Only those who have ventured into real-life data gathering under conditions of ultra sensitivity about confidentiality and informed consent, not to mention highly district-specific interpretations and means of maintaining records, will appreciate the problems overcome in working in and with twelve jurisdictions. Chapter IV also presents a general descriptive picture of the districts and the students who were the subjects of the investigation, including comparative sex, ethnic, and other data. Significant here are the consequences of our identification of subject pools and the sampling from them, together with the contrasts between the group actually studied and those not studied because they had moved away (who in turn provided a subsample for our "mobility study").

Basic follow-back data are presented in V on subject pools and samples. Results specific to the basic questions asked about the educational success of the decertified students are presented in Chapter VI, beginning with test results on the Metropolitan Achievement Test followed by teacher marks and other information of interest.

Chapter VII presents results of the mobility study, these being basic to the interpretation of the success findings in Chapter VI. Chapter VIII evaluates the program of transition in the eyes of the teacher.

Chapter IX provides the interested reader with some findings of the project with respect to the use of standardized achievement batteries with special students. Our procedures led to data of considerable interest to guidance personnel, special educators, test publishers, and school administrators.

Chapter X provides a summary of findings together with further discussion of their significance, ending with a set of conclusions and recommendations.

The instruments gathered in the appendix will prove of interest to those who may conduct similar studies. Each instrument represents a succession of try-outs in actual field circumstances; it is hoped that the formats, the coding categories, etc., will save energy and funds for future investigators. The separate reports and other papers included represent specially targeted papers developed during the fiscal life of the project; not included are further reports in current or future preparation.

Acknowledgements

It goes without saying that the conduct of this project, involving as it did the cooperation of 13 school districts, the State Department of Education, personnel in three Universities, a research laboratory, computer facilities, miscellaneous technical personnel, owes much to the prodigal gifts of time, patience, and cooperation rendered by many. We should like to make public acknowledgement of those who helped.

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In each of these districts, a special thanks are due the district office staff and the administrative, counseling, instructional, and clerical staffs of the many school sites who cooperated fully in locating information and providing us valuable space in order to collect the data. With their commitment, the study successfully met its objectives.

Professor Barbara Keogh of the University of California, Los Angeles, was helpful in early stages both with assistance in conceptualizing the study and with information about particular school districts in which we had interest. Mr. Earl Owens of the Office of the Los Angeles County Superintendent of Schools assisted with early formulations of this study.

Gratitude is expressed to Deans Melbo and Knezevich of the School of Education at the University of Southern California for providing space for a very necessary Los Angeles Office as the headquarters of the data gathering. USC Professors Robert A. Smith and William Theimer, Jr., provided technical consultation on several problems.

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CHAPTER II

The Problem and Review of the Literature

The project is best seen in the light of historical developments which even now continue in progress These are larger than the special or the mainstreamed education of handicapped learners, they are a part of a massive shift in the public philosophy about the place and the rights of women, of minority groups, of the institutional residents. Abetted by civil rights class action suits, there has been an acceleration of changes that had been occurring right along, particularly since Brown vs. Board of Education, the landmark Supreme Court determination in 1954.

The reader is aware of movements variously called advocacy, normalization, deinstitutionalization. mainstreaming, and the like. With particular reference to the mildly mentally handicapped learner, formerly called the marginal EMR or educable mentally retarded, early concern over his segregated education and his labeling and potential stigmatization may be seen as dating back to Johnson's (1962) **paradox paper**. Johnson, with credentials of being one of the most vigorous supporters for an adequate educational program for the mildly retarded and one of the chief architects in the expansion of such programs following World War II pointed out the disappointment many were beginning to express, primarily that the superior education anticipated in the segregated program could not be demonstrated. This concern led to the efficacy studies, reviewed below, and to a civil rights concern as well A second and more vigorous impetus came in Dunn's (1968) paper which reinforcing Johnson's doubts, sounded clear alarms about the civil rights issue. This issue was made first in terms of whether the labeled segregation with its great risk of stigmatization was too great a price to pay for doubtful benefits of segregation, and second in terms of the increasingly apparent disproportions of minority ethnic students in such labeled programs. First we provide a general review of the literature.

The Demise of the Special Class

Since the appearance of the Dunn (1968) article questioning the practice of placing mildly retarded children in self-contained special classes, the field of special education has been subjected to critical self-evaluation. At first the debate centered around the practice of placing EMR children in such settings, but more recently a much broader debate has arisen over the wisdom of moving from a categorical approach to a noncategorical approach in which the delivery of services to children would be without regard for their categorical affiliation Legislation has been passed, making placement of mildly retarded more difficult, conventioneers have heard the various sides of this issue, conferences have been called which focus exclusively on the categorical/noncategorical issue in special education, and more recently the discussion has turned to mainstreaming.

Some professionals in the field have apparently interpreted Dunn's article as "empirical evidence" that EMR classes should be totally abolished, although Dunn (1968) did not call for such radical surgery. It is clear, however, that historically, many special educators have seen the self-contained EMR classes as the way to educate children with IQ's ranging from 50-70, and this restrictive view has proven stifling (MacMillan, 1969). Instead of developing a variety of ways in which services might be provided to children with special learning needs, we came to deliver these services only in the context of the self-contained class.

Dunn (1968) argued against special classes for EMR children on the basis of the following: (1) the composition of such classes typically consists of a disproportionate number of minority children who are not "truly" retarded; (2) such classes have not resulted in academic and personal growth of the dimensions originally expected, and (3) such practices of identifying and labeling result in negative self-fulfilling prophecies and mortifications of the self for those so labeled. In a response to Dunn, MacMillan (1971a) has questioned the evidence on which Dunn's case rests, contending that the research done to date on these topics generally has been poorly designed and the results conflicting. A discussion of the literature related to these issues follows: (1) the efficacy of special class placement for EMR children; (2) the effects of placement and labeling on children; (3) the identification process; (4) the operation of motivational variables in this population; and (5) a statement of issues which need to be researched.

Efficacy of special class placement. A given administrative arrangement is in itself neither good nor bad. As Goldberg, Justman, Parson, and Hage (1961) noted with regard to the gifted, what counts is what is done with a group once it is established. The argument applies equally well to the lower end of the intellectual continuum; hence, poor implementation should not be confused with a "poor administrative arrangement." In fact, a debate over the best placement for EMR children, special class versus regular class, seems to be an academic exercise which helps little in deciding the most efficacious way to provide needed services to a specific child.

For any given child, the better placement depends on a whole host of variables unspecified in the question of the efficacy of special or regular classes for a low IQ child. Among the questions cited by MacMillan are:

(1) How competent are the teachers in each setting for dealing with the specific characteristics of the child in question?

(2) To what extent has the child developed prerequisite readiness skills in the regular class?

(3) How does the child respond to the consequences likely to be used in the regular class?

(4) What is the general level of functioning of other children in the regular class, or to what degree will that child deviate from the other children?

(5) Does the regular class teacher have the time needed to accommodate this child? (1971a, p. 2)

With few exceptions (e.g., Goldstein, Moss, & Jordan, 1965), the efficacy studies were poorly designed, replete with sampling biases which in combination render the results uninterpretable. In a survey published by the U.S. Office of Education, Franseth and Koury (1966) found no clear support for either homogeneous or heterogeneous grouping in terms of academic achievement or social/emotional adjustment. For example, both the Cassidy and Stanton (1959) and Thurstone (1960) studies found EMR children in regular classes to exceed those in special classes on academic achievement. Yet, in neither of the studies were subjects randomly assigned to one of the two treatments. Specifically, the question is: Had those EMR children been allowed to remain in regular classes simply because they were achieving better academically?

In the one study where subjects were assigned at random (Goldstein et al., 1965), EMRs in the regular class were found to achieve significantly higher in reading at the end of a two-year period; however, by the end of the four-year period the children in the self-contained class had caught up to the former group. Hence, Blackman and Heintz (1966) concluded that this study, the best of the series, did little to undermine 30 years of research on the efficacy of special class placement, in that special class children did not achieve any better than did those placed in the regular grades. In a series of studies (Bacher, 1965; Baldwin, 1958; Blatt, 1958; Carroll, 1967; Diggs, 1964; Kern & Pfaeffle, 1962; Mayer, 1966; Stanton & Cassidy, 1964) the findings consistently indicate that differences in achievement between these alternative placements are negligible. If a trend can be trusted in light of the methodological weaknesses, it would seem that there is at best a slight advantage in regular class placement on academic achievement.

Using a dependent measure other than the typical achievement measures, Porter and Milazzo (1958) studied social competence and economic efficiency as outcomes of special and regular class placement for EMR children. They studied the subjects in their adulthood, and found that post-school adjustment of children who had been enrolled in special classes was markedly superior to that of equally retarded children who had remained in regular classes. Again, the small sample size (12 in each group) and the lack of random assignment render these findings questionable. Two points that bear emphasizing, however, are that dependent measures other than academic achievement may be more telling and valid when considering the effectiveness of a certain program, and that longitudinal studies may be necessary in order to obtain certain of these measures.

The above studies all compared regular class with segregated class placement. There was an older series of studies which did not contrast the special class with the regular, but merely reported on the adult status of those who had been in EMR-type special education. The typical finding was that the vast majority of former EMR students were not labeled in any way nor were they distinguishable on criteria of social and economic success from their work peers. There was some evidence of attempts to hide their educational history. A good review of these older studies is to be found in Goldstein (1964).

A further dependent measure commonly used is social/emotional adjustment. Methods of assessing this dimension have varied from study to study, making comparisons of results difficult. Going back to the studies discussed earlier, Cassidy and Stanton (1959) used teacher ratings as one measure, while Thurstone (1960) used a sociometric device. In the former case, the validity of the teachers' ratings is questionable because of the different frames of reference, while the latter procedure makes the results difficult to compare, since acceptance within a special class is hardly comparable to acceptance in a class with higher ability children. Meyerowitz (1962, 1967) working on the Goldstein et al. (1965) project, studied the effects of placement on personality characteristics of the subjects. Using the Illinois Index of Self Derogation, he found that children in special classes were more self-derogatory than those in regular classes. This scale (IISD), however, is an instrument with unknown validity and reliability.

Some, such as Goldstein (1963), have argued that the types of studies cited above have led to speculation which has only looked at one side of the coin. Goldstein writes:

> There are those who wish to avoid the false positives inherent in early placement. They express the very reasonable fear that some children will be tainted unjustifiably with the label "retarded" if they are admitted to a special class at age six and later gain intellectually beyond the upper limits for such classes. However, we must not overlook the fact that such a child, through his adequate achievement in an appropriate regular class placement, stands an excellent chance of erasing the label.
>
> Instead of becoming preoccupied solely with labels and stigma, we might do well to look at the other side of the coin and ask what effects delayed placement has on the personality development of the child, the status he acquires among his regular class peers, and the pressures placed on the family. In all justice, we cannot close our eyes to the fact that the retarded child in the regular class can be and frequently is labeled by his peers in much the same way as children in special classes. (1963, pp. 12, 52)

Some empirical evidence is available on the last point made by Goldstein. Johnson (1950) and Johnson and Kirk (1950) studied the social position of retarded children in regular classes. Unfortunately, the sampling problems discussed earlier regarding efficacy studies contaminates the findings of these studies as well. A type of psychological segregation was found typical for retardates in regular class placements in both studies. Johnson (1950) did, however, find approximately 5 per cent of the retarded identified as "stars" on a sociometric device. It would be interesting to have descriptions of these children, in that they might indicate characteristics associated with high social standing in a regular class which could aid us in determining which EMR children might profit from such placements.

While Dunn (1968) cites Kirk's (1964) review as supportive of his contention that retarded pupils make as much or more progress in regular grades as they do in special education, he fails to include Kirk's (1964) mention of the pitfalls inherent in the studies which deal with the special versus regular class debate:

(1) Problems in sampling--taking in situ groups to compare.

(2) Lack of control over the length of time spent in special classes prior to the evaluation.

(3) Lack of delineation of a special class, the curriculum, or the teacher qualifications.

(4) Measurement instruments used in the studies often improvised, and therefore of questionable validity and reliability.

Kirk goes on to conclude that "until we obtain well-controlled studies of a longitudinal nature, our opinions about the benefits or detriments of special classes will remain partly in the realm of conjecture (p. 63)."

The teacher variable has defied educational researchers in evaluating curricula and administrative arrangements since the beginning of educational research. Likewise, the failure to control this variable has plagued the attempts at evaluating special classes. Any particular low-IQ child placed with the "right" teacher, regardless of the administrative arrangement, is likely to benefit. Unfortunately the reverse is just as true. Davis (1970) argued that because of the demand for more and more teachers in classes for the mentally retarded, specified requirements for credentialling are frequently modified or postponed. While one would not consider being operated on by a surgeon operating on a "postponement of requirements" or being defended in a court of law by a lawyer operating on a "partial fulfillment of requirements," we seem satisfied to allow children identified as needing special teaching skills to learn under a teacher whose preparation fails to meet minimal standards as set by a particular state. Is it any wonder, then, that the children assigned to such a setting have not progressed at a rate considered appropriate? To what extent are the "failures" of special classes attributable to the administrative arrangement, per se, and to what to the teachers inadequacies?

Related to the above discussion is the possibility that teachers of the mentally retarded enjoy little status in the schools. Studies by Jones and Gottfried (1966) and Meyers (1964) had teachers and student teachers respectively rate the prestige of teachers of various exceptionalities (e.g., severely retarded, blind, gifted, orthopedically handicapped). They found that teachers of the EMR enjoy little status among colleagues and individuals in teacher training. The most dramatic finding, however, was that the teachers of the EMR rated themselves lower than they were rated by regular classroom teachers. Hence, not only are they assigned little prestige in the schools, but they appear to accept the lack of prestige as being justified. If the above findings are taken at face value they well might support Dunn; however, it may also reflect a phenomenon related to the type of teacher attracted to this phase of special education. If we attract those threatened by regular classes, or those who are not as capable as regular class teachers, then the failure of special classes must not be interpreted as a failure of the administrative arrangement *per se*, but rather a failure of implementation. If we cannot determine how to individualize in a setting where there is one teacher for 15 to 18 students, are we ready to advise on how individualization can occur in a setting with 30 children and one teacher?

Effects of labeling. Dunn (1968) has noted that a child does not carry the label "mentally retarded" around as a badge of distinction, an observation which goes without mention. His citing of the research of Rosenthal and Jacobson (1968) as supportive of this is somewhat disconcerting in light of Thorndike's critique of that research:

> Alas, it is so defective technically that one can only regret that it even got beyond the eyes of the original investigators! Though the volume may be an effective addition to educational propagandizing, it does nothing to raise the standards of educational research (1968, p. 708).

Obviously, the effects of the label do not operate as a self-fulfilling prophecy in all cases. MacMillan argued, that if the negative effects of a disability label, such as mentally retarded, operated so simplistically, the problem would be easily solved. Could one extrapolate so easily from the Rosenthal and Jacobson work as is implied by Dunn, "the problem could be solved immediately by simply re-labeling the children under consideration 'gifted' and thereby increase the teachers' expectancy for them to succeed (1971a, p. 6)." However, the operation of something like a self-fulfilling prophecy seems to be a reasonable hypothesis in certain instances (e.g., Beez, 1970).

From their review of the literature, Meyers, Sundstrom and Yoshida (1974) proposed a summary of the process which is hypothetically necessary for the irreversibility of the labeling process. The process is as follows:

> (a) Labels bias the teacher's perception of the child's capabilities on certain salient dimensions as ability and academic work, (b) those perceptions are translated into observable behavior which communicate expectancies to the child, (c) the child then behaves

> according to the teacher's definition of the child, (d) those behaviors are consistent with the original perception, and (e) the process is again initiated (p. 19).

These hypothesized operations point out the shortcomings of reducing a highly complex process of teacher-student interaction to one of presuming that special class placement necessarily lead to lower teacher expectancies which bias student achievement. The reader is referred to Meyers, Sundstrom and Yoshida (1974) for a thorough presentation of the literature. However, a brief discussion of the salient points made in that review is presented below.

Ample evidence suggests that lay persons associate negative stereotypes and attitudes with descriptions of hypothetical mentally retarded individuals (Guskin, 1963; Hollinger & Jones, 1970; Jones, 1972). Similar results are found for samples of regular elementary and secondary teachers who either underestimated achievement levels of hypothetical students labeled EMR or stated that they would be least prepared to teach EMR students as compared with other types of handicapped children (Meyers, 1964; Shotel, Iano, & McGettigan, 1972). Although the attitudinal research clearly demonstrates the saliency of the perceived difference between the normal and retarded labels, this line of investigation does not answer the crucial question of how teachers interact with special students in the classroom.

The teacher expectancy literature is extensive not only in the number of studies conducted but also in the paradigms used. This broad scope has contributed to inconsistent results, that is, some studies find expectancy biases and others none. For example, Rosenthal and Jacobson (1968) randomly selected students whose teachers were told that the student was likely to show significant intellectual growth in the near future. Based upon gain scores on an intelligence test, the authors concluded that the high expectancy group at all grade levels improved more than the control group. However, the results of the study have been criticized on methodological grounds (Snow, 1969; Thorndike, 1968). Furthermore, replications of that study have produced nonsignificant results (Claiborn, 1969; Dusek & O'Connell, 1973) as have the few that have used special education children (Gozali & Meyen, 1970; Soule, 1972).

Investigators have also given artificial expectancies like the Rosenthal-Jacobson manipulation to "teachers" (at times, student-teachers, undergraduate education majors) interacting with students in dyadic or small group learning situations (Beez, 1968; Rothbart, Dalfen & Barrett, 1971). The results of these studies show that expectancies are formed by the teacher as the result of a label given to the child prior to interaction with him. That is, students labeled "high" achievers receive more positive interaction than control or "low" achievers. However, these studies were conducted over a short period of time which does not account for possible changes in expectancies as the result of prolonged period of interaction, usually found in the typical classroom setting between teacher and student.

Yoshida and Meyers (1975) tested the time parameter. They presented a video-tape to elementary and EMR teachers depicting a Black elementary grade student who was said to be either in a 6th grade or an EMR classroom. The teachers were told that the student had been trained in concept formation over a period of eight weeks, and that the tape would show four successive testings of the student in concept formation at two week intervals. After each test was shown, the teachers estimated the future achievement level of the child in concept formation. The student's performance on the tasks was contrived to present an increasing trend in correct responses for the sequence of trials. The results showed that the EMR label did not elicit lower expectancy scores than the regular class label for any of the four predictions. Thus, the teachers increased their predictions on each trial indicating that they were sensitive to changes in the student's behavior which resulted in the revision of their expectancies. Similar results of increasing achievement test scores over an academic year have been found for regular students who were ranked by their teachers in the lower quarter of the class (Dusek & O'Connell, 1973); the upward trend in achievement scores was maintained for the same group in the following year (O'Connell, Dusek, & Wheeler, 1974). In short, low status labels or position in class do not necessarily preclude either revisions of expectancies or achievement in academic subjects.

The teacher expectancy bias controversy is far from over. The investigations reviewed above highlight the complex nature of the self-fulfilling prophesy phenomenon. Several points have been made concerning the expectancy process. (1) Attitudes toward labels such as "EMR" have been shown to be negative, however, one cannot assume a direct relationship between these attitudes and teacher-student behavior. (2) Teacher expectancy studies have been almost exclusively conducted on "regular" classroom sample, the few that have used special education situations have found no effects by artificially inducing expectancies a la Pygmalion. (3) The Beez-type studies which show biased effects due to labels do not account for possible changes in expectancies as the result of prolonged periods of interactions such as an academic year. (4) Expectancies do not necessarily result in precluding progress in academic subjects, even for those students who are said to be enrolled in special classes. Although teacher expectancies may operate in the special classrooms under certain conditions, the results from studies reviewed here show that simplistic approaches to the hypothesized effect are inappropriate. More investigations are required which attempt to systematically study the variables which account for the development, revision, and maintenance of teacher expectancies as well as their effects on teacher behavior and student performance in the natural setting of the classroom.

It seems reasonable to hypothesize that deficit labels do affect how persons so labeled behave and how those outside of that population behave toward those so labeled. In the first instance, there is simply too little evidence to make any definitive statements. In the latter case, studies (Hollinger & Jones, 1970; Meyers, Sitkei & Watts, 1964) found that among laymen, the term "mental retardate" was perceived as more stigmatizing, since it was frequently associated with physical disability and mental illness--viewing it pessimistically and with denigration. Obviously, there is much research needed on the specific effects of disability labels on children.

The evidence cited by Dunn as supportive of the negative impact of such labels warrants a closer look. Goffman (1961) does, in fact, discuss the stripping and mortification of the self--important concepts indeed in understanding the careers of inmates of institutions such as monasteries, military camps, prisons, and mental hospitals. Note, however, that the institutions mentioned do not even include institutions for the mentally retarded. Among the degrading experiences described (Goffman, 1957) are the removal of personal clothing and possessions, the restrictions on privacy, the reduction of independence of movement and decision, the restriction of communication with the outside world. These experiences are hardly typical in a special class for the EMR. Hence, extrapolation of findings from these settings to a setting (i.e., self-contained EMR class) which is not an institution and contains individuals who are labeled in an altogether different manner from the above groups seems risky at best. At the same time, Dunn failed to mention the work of Edgerton and Sabagh (1962) which did apply Goffman's constructs to patients in an institution for the mentally retarded. These investigators studied stripping and mortification as they applied to the careers of the mentally retarded and their findings were not consistent with those of Goffman (1961).

Edgerton and Sabagh (1962) suggest that the mortifications of the self may be fewer within institutions for the high-grade retarded than is the case on the outside. In fact, for the high-grade retarded there may be certain aggrandizements of the self accrued as a result of having low-grade retardates with whom to compare himself for greater social success within the institution, the support and approval from ward personnel, and the opportunity for validation of his normality provided by his peers. As noted by Cromwell (1963), these arguments are reminiscent of the rationale presented by Johnson and Kirk (1950) with regard to the EMR in special classes. That is, the social position of the EMR is improved when placed in a setting where the mean IQ is reduced.

The effect a label such as mentally retarded has on a given child depends on a variety of variables. To begin with it is necessary to examine his preidentification career. To what extent has the child been labeled "dumb" or "stupid" by peers or others (e.g., parents, teachers, and other adults)? To what extent has he been isolated or rejected socially in the regular class and in other social situations? Answers to these questions provide clues to the extent to which the self has suffered mortifications before he has been formally labeled and placed.

Secondly, one must assess whether or not the child accepts or rejects these external evaluations. If he rejects them, he is also likely to reject the "mentally retarded" label when the educators try to attach that to him. Edgerton and Sabagh (1962) describe children coming from minority families of low socioeconomic status as follows:

> This nonacceptance may have been facilitated by several circumstances. For instance, the entire family of the retarded person may have been rejected and mortified by the community at large and feel the need to protect its members against the onslaught of "authorities." Many of the mentally retarded come from families of low ethnic or socioeconomic status, and the family members may have had humiliating experiences with law enforcement or welfare agencies. Such a family will protect its members against those who 'acuse' them of mental retardation, and may not even believe that the accused actually is retarded, since his intellectual level may not be much below that of his relatives. To them, this may simply be another instance of discrimination against the whole family. (1962, pp. 265-266)

In such an instance, that child may be immunized against mortifications of the self in which case the label may have far less effect than would be the case where the child accepts the label as accurate.

Once a child is identified, labeled, and placed in a special class, it would again be helpful to understand whether he accepts the label as accurate or whether he denies the accuracy of such a label. Should a child reject the label and find himself in a class with children of clearly inferior status, he is able to derive certain aggrandizements by means of comparison. Hence, he renews his attempt to define the self as adequate and rejects those things that challenge such a positive self-perception. It may be that for some low IQ children the special class provides a haven which supports his denial of retardation, whereas a regular class would confront him with evidence and confirmation of his retardation in that his peers would be clearly superior academically. Such a situation would confirm the accuracy of such derogatory labels and disarm the child of his defense mechanisms.

Meyerowitz (1962, 1967) did study the effects of placement on personality characteristics of the mentally retarded, and it was done within the context of a study in which the subjects were randomly assigned to classes (i.e., Goldstein et al., 1965). He did find more self-derogation in children placed in special classes; however, the findings are based on an instrument (Illinois Index of Self Derogation) of unknown validity and reliability.

MacMillan, Jones, and Aloia's (1974) recent comprehensive review of the literature on the effects of the mentally retarded label on a host of outcomes (e.g., self-concept, peer acceptance, post-school adjustment) failed to reveal the negative effect to be so widely accepted. However, the posture assumed by the civil rights courts is essentially that the burden of proof lies with those who would label, who must show that labeling is in the interests of the child. Although the negative effect has not been persuasively demonstrated, in the absence of conclusive evidence in either direction in the eyes of the courts, "no label" is the preferred alternative.

Interest in classification and labeling has apparently been given a huge project coordinated by Professor Nicholas Hobbs. The products of that venture are impressive and should be consulted by the interested reader (see Hobbs, 1975a, 1975b, 1975c), since labeling is approached in a variety of ways (perspective of parents, children, funding agencies) and extant research summarized.

In conclusion, we do not yet understand all the effects of placement on personality. On the one hand we find evidence (Meyerowitz, 1962) indicating that the child suffers in such a special class, while on the other the evidence indicates that he suffers in a regular class (Johnson, 1950; Johnson & Kirk, 1950). In other words, according to the evidence the child cannot win--but all of the evidence is of questionable validity in terms of sampling bias, lack of control of preplacement experiences, and the questionable nature of the criterion instruments.

Identification process. One point made by Dunn (1968) is that numerous minority children are inappropriately labeled as EMR. The stigma attached to this label very probably operates in direct opposition to the potential advantages accrued to reduced pupil/teacher ratio of the special class. It is only fair to indicate that special educators have not always had a share of control over the identification and placement of children into their special classes. The usual admissions and discharge committee may consist of everyone of significance except the special class teacher. The identification is generally initiated by the child's regular class teacher, followed by a psychologist's study, upon which the A & D committee consisting of the psychologist, principal, physician, etc., decide first to identify the child as eligible for EMR, and secondly, to place, the placement oftentimes being delayed because of lack of space in the special program. The point of these remarks is that it was not necessarily special education which perpetrated the alleged labeling, but the entire system by which education operates (Ashurst, & Meyers, 1973).

A second matter of significance is that such charges as Dunn's of inappropriate labeling of minority children is in one sense beside the point if one is concerned with a best educational placement. That one subcultural group should have required more special educational attention than another was never intended, but was found out after the processes had been operating. The ethnic disproportion probably would have been seen as a logical outcome of disadvantaged status in home and community environment except for the association of identification with stigmatization. We later take up more fully the shift of attention from educational need to validity of EMR label.

The precise reason so much consideration went into the development of a flexible definition of mental retardation by the American Association on Mental Deficiency with the support of the National Institute of Mental Health was to deal with the borderline cases (Heber, 1959; revised, 1961; Grossman, 1973). Severely and profoundly retarded individuals are identified with a minimum of difficulty, but borderline cases require careful attention. The most current definition is: "Mental retardation refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior.

Clearly, three specific criteria must be met before an individual is to be considered retarded: (1) IQ is at least two standard deviations below the population mean; (2) mental retardation must occur prior to age 16; and (3) there must be evidence indicating impaired adjustment. The absence of any one of the three criteria should preclude placement in a speial class. In practice, an intelligence test may on occasion be used to "justify the label 'mentally retarded' (Dunn, 1968, p. 9)"; however, such a practice goes on in violation of criteria constituted to determine the presence of the condition or state labeled as mentally retarded.

Most professionals in the field of mental retardation feel somewhat uneasy about the reliance of IQ in diagnosing retardation, particularly when dealing with borderline cases involving minority children from culturally different backgrounds. Clausen (1967) stated what many others have come to realize when attempting to use the AAMD classification system, namely, that there are few guidelines for determining an impairment in adaptive behavior. As a result one makes extremely subjective evaluations of "social adequacy"; hence, clinicians ignore social adequacy and make the diagnosis on the basis of general intellectual functioning alone.

Alternative tacks may be taken in attempts to deal with the above problem. Clausen (1967) suggested the cut-offs be dropped from one standard deviation below the mean (i.e., IQ = 84 or 85) to two standard deviations (i.e., IQ = 68-70) for evidence of subaverage intellectual functioning. While the earlier definition of mental retardation (Heber, 1961) by the AAMD adopted SD below the mean for the IQ cut-off; the most recent revision (Grossman, 1973) used 2 SDs. This latter posture holds that below IQ = 70 or 75 individuals tend to show evidence of impaired social adaptive behavior caused by the low level of intellectual functioning (Clausen, 1967, p. 473). This would appear to be Dunn's preference. In one address, Dunn (1970) set the following IQ cut-offs for EMR placement: Anglo children, IQ = 70; American Indian children, IQ = 65; and inner-city Black children, IQ = 55. Such limits are arbitrary and still reflect a psychometric definition of retardation of which Dunn (1968) was critical.

Dunn's (1968) charges against school psychologists went unanswered until the publication of a recent monograph by Meyers, Sundstrom, and Yoshida (1974). Their penetrating critique of research pertinent to the assessment of minority children reported no conclusive support for any of the following variables frequently cited as unfair to minority children: biracial testing, pretest information, self-fulfilling prophecy, etc. These results do not indicate that the minority child's performance is not affected by these variables--only that the evidence thus far generated has not revealed such a bias. Similar conclusions were reached by Sattler (1970) in a comprehensive review of extant evidence on psychological testing of ethnic minority children.

To date, the evidence should make us extremely cautious in the administration, scoring, and interpretation of intelligence test results. The developmental literature does reveal differences between ethnic groups on motivation, anxiety, language, and expectancy for failure which may well serve to depress performance. However, these variables have been demonstrated in non-standardized learning tasks and await replication under standardized test conditions. Furthermore, the evidence on translating tests into Spanish have not been promising (Sattler, 1970).

A recent article by Cronbach (1975) puts the present controversy over mental testing in historical perspective. In a related article by Cleary, Humphreys, Kendrick, & Wesman (1975), the report of an APA ad hoc committee, the authors argued forcefully for the restrained and cautious interpretation of intelligence tests administered to disadvantaged youngsters. In addition, they defended the fairness of the tests based on evidence of regression lines for Black and Caucasian children derived from mental test scores and educational outcomes. They contended that such analyses fail to reveal either overprediction for Caucasian subjects or underprediction for Black subjects. However, they noted the need for such analyses prior to any statements about the fairness of the tests for predicting any non-educational outcomes.

Another approach would be to develop more objective means of assessing adaptive behavior which would be valid for use with borderline children of minority status. Such an attempt has been made by Mercer (1971) on an experimental basis. Her adaptive behavior scales and pluralistic norms provide an interesting and promising alternative to the strict psychometric classification system used by some.

It has been the experience of many in special education that committees charged with considering EMR placement for a child approach the task with far more consideration than was implied by Dunn. Before such a conference is called, two bits of information are already available. First, the child's performance in the regular class has been poor enough, by comparison to the class as a whole, to attract the teacher's attention. Second, an individual intelligence test (usually supplemented by an entire battery of tests) has been administered on which the child scores below the district cut-off for EMR (usually IQ of 70). This is shown in the actual records of public schools (Ashurst, & Meyers, 1973).

The possibility of bias in intelligence testing of minority children, however, should sensitize those responsible for making assessments to the necessary relationship between examiner and examinee (Riessman, 1962) to insure the optimal performance by the child (Pasamanick, & Knobloch, 1955). Psychologists and psychometrists charged with evaluating children from different social and/or ethnic backgrounds might find the procedures reported in Hertzig, Birch, Thomas, and Mendez (1968) or the "optimizing" test conditions used by Zigler and Butterfield (1968) as helpful in countering this potential source of bias.

One may argue that tests of intelligence in use are culturally biased and thereby discriminate against the minority child. However, they are biased in the same direction as are the schools. As a result, these instruments do have rather good predictive validity on a short term basis. Taken in combination (regular class problems plus low IQ), these bits of evidence tell us that this child is likely to continue encountering problems if he is left in the regular classroom and presented with a standard curriculum. In other words, this child needs something "special." In this context, special education is not synonymous with self-contained classes.

Among minority children meeting the two criteria specified above, there are at least several types of children.

(1) Bilingual children (e.g., Chicano, Puerto Rican) in need of accommodation in the area of language, but who, genotypically speaking, are not defective or retarded.

(2) Children from environments described as impoverished, in that they are lacking in materials or experiences considered beneficial to a child in adjusting to the school. Again, these children are not genotypically retarded.

(3) Children who have developed failure sets--i.e., who have poor self-concepts and expect to fail before they even attempt a task.

(4) Children of dull-normal ability with so much emotional overlay that their performance in school and on the intelligence test is depressed below the district cut-off.

(5) Children who simply received a poor genetic pool or suffered prenatal, paranatal, or post-natal damage resulting in lowered cognitive capacity. These children are genotypically retarded.

Obviously, one could go on to specify greater numbers of types and any typology suffers from ignoring within-type variance. However, the point to be made concerns the nature of the "something special" needed by each of the types of minority children of low IQ described. In what kind of administrative arrangement can an individual child maximally benefit? In some cases (such as those described in 2 and 3 above) a resource specialist, as described by Dunn, may be sufficient. In others, (such as 1, 4, and 5) a more intensive program may be needed. Some, in fact, may be best off in a self-contained special class! In none of the cases should the child be allowed to flounder in a regular class with no ancillary services.

Before leaving the topic of placement, it should be mentioned that many minority children whose IQs alone would warrant EMR placement remain in regular classes. In her demographic study, Mercer (1971) identified a group of children she labeled as eligibles--defined simply as IQ below 79 but for a variety of reasons had never been referred by teachers or considered for placement. If tested (and they are not individually tested if they have not been referred) they show "eligible" IQs for EMR placement. The teachers, whose notes in the cumulative records do note that such children are slow learners, indicate an ability to cope with the learning problems they presented in these children (Mercer, 1971). There has been no reason to refer, to test, or to label. Note that the typical school practice has not been to look for low IQs but rather to permit the child and teacher to get along first before the application of the psychometric.

The shift of attention from educational need to the validity of a label. The above reveals that the concern seems to have been whom to call retarded rather than how to educate a child with a learning handicap. Mercer's (1973) attempt to make appropriate allowance for non-academic, non-school adaptation attends to the appropriateness of the label rather than to the need for a special learning program. The lowering of the IQ guidelines by the state leaves unanswered the question about the learning difficulties of those no longer to be EMR placed. It is well to note a few points of historical perspective. Many of those programs later called "EMR" were initially called "special training;" they were carried on with an avowed intention of providing an academic education for those slow to learn in regular class and for whom special methods and smaller class size would be helpful. It was only later that the umbrella term "mental retardation" was applied upward from the more frankly biomedical retarded children to these essentially normal children who typically are not identified as different before school age and disappear into the labor force without a label after leaving school. That is, "EMR" was not intended seriously as a medical-model diagnosis but a label for persons and programs concerning the mentally slow but otherwise normal children; this pertained mostly to the so-called borderline cases.

The label of retarded together with the ethnic disproportions of those who wore the label diverted attention from the educational concern to the concern of who is "truly retarded." It pulled the emphasis away from the reality that the child had not been doing well academically for two or three years to considerations of biased testing (Meyers, 1973, Meyers, Sundstrom, & Yoshida, 1974).

For many there was an automatic association of "EMR" with a medical model type of mentally deficient child always doomed to be dependent, and it was this form of thinking which led to the civil rights issues, especially as it was becoming clear that the general public thought in terms of the medical model and that stigma attended the wearing of the label.

Meantime a child with the forms of learning needs represented in the borderline EMR levels could have his needs served only in such a labeled-segregated special class or in a regular class. There was no third alternative. California's recent history shows a series of attempts to secure nonlabeled, noncategorical special assistance for learning handicapped children. The legislature was not responsive, and did not attend to the matter till court action mandated it. That is to say, there being no special help but that for the labeled group, it seemed to be necessary to violate a child's civil rights to secure him some form of special education.

A recent development should help give accent to the point we make. California law has always specified that a child to be placed in EMR was to have his retardation certified by an individual intelligence test. The law does not say that all children are to be screened by individual intelligence tests. Implicitly the law acknowledged what has been the practice, that children for EMR placement would first be found to experience grave difficulty, and if retardation were suspected to be the cause, that fact would be verified by testing. This meant in effect that the child could *not* be placed unless he met the official guideline IQ. The law does not say in any way whatsoever that children with low IQs are to be sought, identified as MR, and then placed. Any practice like this was in violation of ethics and the spirit of the law (though a few school districts have been known to take some such steps to fill empty special class seats).

The recent event was that the State Board, in response to very recent (1975) continued litigation in the Larry P. case, temporarily banned any placement into EMR on the basis of testing. The psychologists quickly rose to point out that the Board had taken from their hands the very basis by which they could keep a child out of such a placement, leaving him defenseless, as it were, against arbitrary placement. To generalize, the medical model has been of use not only to identify *for* placement but also to *avoid* it (Ashurst & Meyers, 1973).

Motivational variables. Any discussion of grouping, of which special classes are one form, must ultimately consider the flexibility, or inflexibility, of a particular grouping arrangement. Special classes for low-IQ children came to be considered the best way to educate such children. Paradoxically, a field committed to individual differences appears to have assumed a homogeneity within the group now labeled "mentally retarded." Despite the failure of evidence to support conclusively the special class arrangement, children achieving IQs in the EMR range have been placed in such classes and taught "the EMR curriculum," since it was assumed that they share common characteristics. About the only characteristic on which there is any commonality is on IQ (see Berkson, 1966), while on virtually every other characteristic there is as great, if not greater, intragroup variability as among nonretarded children. Yet the adaptations which occurred have been principally cognitive adaptations of the environment.

In an earlier article, MacMillan (1971b) argued that attempts to adapt the environment in special classes for low IQ children have been basically cognitive adaptations. It is as if the line of reasoning went as follows. Since these children are *mentally* retarded, remediation must be designed that will ameliorate their *mental* deficits. Yet the literature abounds with evidence which indicates that for a high proportion of low socioeconomic status, low IQ children, the problems in learning (or more accurately performance) originate in the motivational sphere rather than in the cognitive sphere (see Zigler, & Butterfield, 1968, MacMillan, 1971b). Hence, some reasons special classes have already failed to achieve the degree of success hoped for may lie in the fact that these environments have tried to treat problems originating in the motivational sphere by adapting the environment to treat cognitive deficits. Such a lack of balanced emphasis would seem to doom a program of failure.

Zigler (1966) has summarized extensive evidence which indicates that motivational and emotional variables depress the performance of retardates below the level indicated on the basis of their cognitive development. Zigler (1968) in his American Educational Research Association address generalized many of the findings with institutionalized patients to disadvantaged children. While space does not permit a comprehensive review of motivationally-related variables which probably affect academic performance (MacMillan, 1971b), three variables have been selected in order to show how such phenomena depress performance levels of disadvantaged children below what would be expected. The three variables are expectancy for failure, positive and negative reaction tendencies, and outerdirectedness.

Expectancy of failure. As a result of personal academic failure and social "histories of failure" many children develop problem-solving approaches characterized by the primary motivation to avoid failure rather than to achieve success. Failure occurs so often in their life space that such children approach a new task with an expectancy to fail before they even attempt the task (MacMillan, & Keogh, 1971). The development of a failure set often results in a lowered level of aspiration, which prevents the child from attempting tasks slightly beyond their present level of achievement.

Clearly, teachers must reverse this failure set if the child is to progress at the rate of which he is capable. Teachers cannot allow the child to avoid tasks which are slightly beyond him; yet, at the same time must protect the child from experiencing unnecessary additional failure. Techniques such as prompting, as opposed to confirmation, may provide a means to guarantee success while still "challenging" him with tasks which are not trivial and for which successful completion represents a mastery.

Positive and negative reaction tendencies. Zigler (1966) labeled the desire to interact with an approving adult as the "positive reaction tendency," and the wariness of adults as the "negative reaction tendency." Children who have experienced social deprivation desire to interact with an approving adult and at the same time are hesitant to do so due to their many negative encounters with adults (e.g., teachers). These two phenomena are thought to be positively related to the amount of social deprivation experienced and the amount of negative interaction with adults. In describing the operation of these two variables with disadvantaged children, Zigler writes:

> Children who do not receive enough affection and attention from the important adults in their life space, suffer in later years from an atypically high need for attention and affection. We find that such children, when faced with cognitive tasks, are not particularly motivated to solve the intellectual problems confronting them. Rather, those children employ their interactions with adults to satisfy their hunger for attention, affection, and yes, as unscientific as it may be, their need for love. (Zigler, 1968, p. 21)

As the child expends energy protecting the self, less energy is available for solving cognitive or academic tasks. Hence, the teacher must cope with these motivational variables before the child can devote his energies toward the solution of academic tasks.

Related to the above discussion is the child's reinforcer hierarchy; a construct unique for each individual. Zigler (1968) contends that being correct is not as high on the hierarchy for disadvantaged and retarded children as it is on the hierarchy of a middle-class nonretarded child. Therefore, one cannot assume that lower-class EMRs are putting forth a maximum effort in order to be correct. In fact, there is evidence to the effect that such children perform significantly better under extrinsic reward conditions (Keogh,& MacMillan, 1971; Terrell, Durkin, & Wiesley, 1959). Hence, it is essential that incentives be found on an individual basis which serve as reinforcers and which do result in maximum effort on the part of the child.

Outerdirectedness. Repeated failure can also result in a problem-solving type characterized as outerdirected. Zigler described it as follows: "...the retarded child comes to distrust his own solutions to problems and therefore seeks guides to action in the immediate environment (1966, p. 99)." As a result, the child comes to overrely on external cues; a tendency which runs counter to a normal developmental trend in which children become more inner directed as cognitive development releases the child from his dependence on external cues.

MacMillan (1971b) described and suggested techniques for dealing with children exhibiting these motivational characteristics. As Dunn (1968) describes the role of the resource teacher, the adaptations of the environment are still primarily cognitive in nature. As such, the resource teacher arrangement for serving those low IQ children whose performance deficits originate in the motivational sphere would seem as inappropriate as have those self-contained classes wherein the environmental adaptation have been cognitive in nature. Regardless of the administrative arrangement into which these children are placed, such children, in substantial numbers, are likely to manifest a high expectancy for failure, positive and negative reaction tendencies, and outerdirectedness. Unless these motivational variables are dealt with by teachers, children of this type are unlikely to succeed in an integrated situation to any greater extent than they have in the special class.

Issues. At this time the Zeitgeist in the field of special education is toward integration of some low IQ children, and possibly mildly disturbed and learning disabled children, back into the regular school program to whatever extent is possible. In Exceptional Children (February, 1971) the Policies Commission of the Council for Exceptional Children prepared some statements and called for a response. Below are some quotes from that statement which support the above contention:

> Special educators should organize their efforts within the regular school framework whenever possible, seeking to create a total educational environment suitable for all children. By keeping their base in the regular school system, special educators foster development of specialized resources within the regular school framework and add their own specialized instruction in closely coordinated ways. Special educators should make the enhancement of "regular" school programs as a resource for children with special needs a primary object of their work. (1971, p. 424)
>
> Special educators should be concerned to enhance the accommodative capacity of education agencies so that children who have special needs may be served effectively. They assist in the development of "regular" schools and lead in forming such specialized programs as are necessary. In decision making concerning individual pupils, simple systems of categorizing are rejected in favor of carefully individualized procedures which are explicitly oriented to educational planning within particular schools and agencies. Regulatory systems which enforce rigid categorization of pupils as a way of making allocations of children to specialized programs are indefensible. Financial aid patterns should be such as to encourage development of specialized programs without putting incentives on simplistic categorizations of children. (1971, pp. 424-425)
>
> Special education should be arranged so that normal home, school, and community life is maintained whenever feasible. Special education placements, particularly involving separation from normal school and home life, should be made only after careful study and for compelling reasons. (1971, p. 425)

Furthermore, at a conference held at the University of Missouri (1971) on the Categorical/Noncategorical issue, it was apparent that the sentiment in the field prefers movement away from the categorization of children and isolation of these children once categorized. However, this is with the recognition that what implications such a move have are not only going to revamp special education, but will also mean a complete revamping of the regular school program. MacMillan (1971a) noted that moving children who deviate more markedly on any number of characteristics back into the regular classroom is a major challenge to regular class teachers, since there is evidence that they cannot accommodate the range of individual differences they are presently confronted with. Hence, somehow we must provide "support systems" which can give the needed assistance to these teachers if they are to be successful in coping with children with special needs.

In that same article, MacMillan (1971a) contended that we must cease debating the regular class vs. the special class issue, since the real issue is "to what extent, and under what circumstances, can a wider range of individual differences be accommodated in the regular class than is presently the case." Such is an empirical question, and must be subjected to empirical testing.

The major problem in research designs used to evaluate the efficacy of special classes was the use of simple between groups research paradigm without attention to possible interaction of method with student individual differences. By contrasting very gross administrative distinctions (special class vs. regular class) little useful information regarding differential pupil outcomes was uncovered. In other words, specific dimensions of either administrative arrangement could be related to child outcomes by the very nature of a between groups design. Treatment variables were submerged in the administrative arrangement as to be inextricably interwoven. One of Kirk's (1964) criticisms of the efficacy studies was that:

> ...there has not been a clear-cut definition of a special class, the curriculum, or the qualifications of special teachers. Special classes vary widely in organization and in curriculum and teaching methods... The administrative labeling of a group of retarded children as a special class for the purpose of receiving state subsidy does not assure it being a special class for experimental purposes. (pp. 62-63)

Related to the above is the question of how can the services needed by children with special needs be delivered in contexts other than special classes? There are some attempts to do just that, but most are not being systematically evaluated. For example, the itinerant teachers who work with individual children periodically may be one means. The resource teachers described by Dunn (1968) may be another. A third alternative may be the use of team teaching in which case one member of the teaching team would be a learning specialist with the specialized skills needed by certain of these children.

As services are delivered in a variety of ways, it is essential that researchers isolate aspects of the delivery services that are related to pupil outcomes. In other words, one must combine within groups designs in order to fully capture the important variables that do affect pupil outcomes either within a given administrative arrangement or across several different administrative arrangements.

Along the same line, there must be attempts to prevent cases from developing and to return children who are presently judged to be misplaced in special classes back into the regular program, both of which imply major changes in the regular program. Therefore, three types of programs need evaluation:

Preventive programs. Rather than constantly focusing our resources on the remediation of problems once they exist, we might focus on the prediction and prevention of learning problems. For instance, one might look to the possibility that certain learning problems occur because of the unfortunate environmental demands which the student cannot meet. One might be able to identify certain skills (e.g., high verbal ability, docile classroom behavior) which are essential if a child is to be successful in a given teacher's class. If a child does not possess these skills, he becomes a likely candidate for failure in that teacher's class. Hence, it may be possible to prevent failure (and subsequent EMR referral) for some children by matching his abilities with a teacher in whose class these abilities enhance the possibility for success. An obvious risk in early identification is of course the securing of false positives with early labeling.

Transitional programs. Assuming that the misidentified children in special classes for the EMR can be identified, the next concern is how does one enable them to move back into the regular program. Clearly, if such children are thrust back unaided the likelihood for success is minimal. Even though such children may warrant reassignment on the basis of IQ and social adjustment, most curricula for EMR classes lag behind in the presentation of tool subjects. Therefore, intensive acceleration in tool subjects is essential if these children are to be placed in regular classes with their peers. How can transition be facilitated? A variety of transitional programs should be designed, implemented, and evaluated in attempts to answer the above question.

Model regular programs. At present, most regular class teachers are unable to cope with the range of individual differences they find in their classes. Therefore, without rather radical modifications in the classroom organization and the development of teacher competencies not presently possessed, the feasibility of inserting children who deviate more markedly is questionable. The resource specialist described by Dunn (1968) may provide one model. Competence based models, in which skills teachers must possess are specified, must be developed and evaluated. Subsequently, regular class teachers are going to have to be retrained or replaced. The former alternative will require inservice training of teachers, and this will require follow-up procedures to insure the competencies taught are being developed and employed.

The innovations mentioned above will require development of many educational models, implementation of these models, and their evaluation. This means cooperation between researchers and school personnel. Without such cooperation, the results of such studies are likely to be invalidated by the lack of controls described earlier with regard to the special versus regular class studies. Unless the quality of the research is high, it will not provide us with the necessary information on which we must make educational decisions regarding children. School personnel will have to endure some inconveniences in order that variables known to affect dependent measures can be controlled (e.g., sampling, teacher variable). Conversely, researchers must involve school personnel from the earliest stages in order that they can provide input on concerns of teachers and constraints operating in the school setting. By working in concert researchers might control independent variables sufficiently to make for tight research, and at the same time research questions that will be seen as important by public school personnel.

Before concluding, the point made in the introduction to this section needs re-emphasis. That is, the issues raised with regard to the education of the EMR can be raised concerning any number of other special education programs such as those for educationally handicapped, emotionally disturbed, and learning disabled children. The major issue is far broader than simply the efficacy of existing educational programs for the EMR. Evaluation is needed on the most effective ways of delivering educational services to children, on the stigmatizing effects of various labels on children so labeled, and on motivational variables as they affect all children.

The future function of the special class. In addition, consideration must be given to the special class. It is very unlikely that all present EMR chidren will be able to be returned to the regular class despite the development of support systems. Some of the present EMRs will simply deviate too markedly to make return feasible. Hence, they will probably continue to be served in a special class in which they spend the majority of their school day. By removing significant numbers of children from these classes, however, the nature of the population being served will be radically different. Therefore, it will be necessary to ascertain the ability levels of those children who remain, and re-evaluate the curriculum, methods, and training procedures for teachers to be used in the self-contained setting.

Furthermore, a consideration can be given to the segregated class as a temporary and remedial setting for children who are best served in it, apart from any so-called diagnostic or labeled condition (Meyers, & Meyers, 1967). It is always possible that the segregated class is, for a given child at a given point in his development, the best compensatory or transitional solution, but success of such a function of a segregated class is impaired by the associated labeling of children assigned. When the emphasis in special education is placed upon educational need and not upon etiologies, then the class can for some be the ideal solution for growth leading to the return to regular class.

It is of interest that the recent decertification and reassignment of 12,000 EMR pupils to regular class was done on the basis not of ascertained educational need but upon reconsideration of whether the pupil met new guidelines as "retarded" consisting primarily of a changed IQ level.

The Rise of Mainstreaming

It must be acknowledged that the foremost trend in special education in the 1970's has been the rise of mainstreaming (Dailey, 1974).

However, while the majority of special educators advocate mainstreaming, it is clear that they disagree on the definition of what it is they are advocating. No concensus definition of mainstreaming exists (MacMillan, Jones, & Meyers, 1975). Consequently, different individuals advocating mainstreaming are in fact advocating quite diverse things, ranging from deinstitutionalization of severely and profoundly disordered individuals through regular class placement of children heretofore educated in self-contained classes.

Definitions of Mainstreaming

One definition of mainstreaming is as follows:

> Mainstreaming is the temporal, instructional and social integration of exceptional children with their normal peers. Integration is based on an ongoing, individually determined educational planning and programming process. Mainstreaming requires clarification of the responsibilities of regular and special education administrative, instructional and supportive personnel. (Kaufman, Gottlieb, Agard, & Kukic, 1975)

The three major components of this definition are integration, educational planning and programming, and the clarification of responsibility. It is paradoxical that nowhere in the definition is there a call for delabeling of the child since the labels were one of the major targets of criticism in the previous delivery system--i.e., the self-contained class. Hence, MacMillan et al. (1975) suggested that a modification in the Kaufman et al. (1975) definition be that no categorical labels be used in order to be consistent with the criticisms that led to the demise of the special class.

The extant literature on mainstreaming tends to focus on the temporal dimension--the concern seems more with WHERE the child is taught rather than WHAT and HOW the child is taught. However, it has been argued that the term mainstreaming denotes more than mere temporal placement--and involves positive steps designed to assure success for the children being returned to the regular class (MacMillan et al., 1975). Temporal integration provides opportunities for learning. The mainstreamed child has the opportunity to learn more socially acceptable behavior from his nonhandicapped peers and is provided an opportunity to be stimulated by more high level discussion, etc. However, when nothing beyond mere physical placement occurs, the probability of these opportunities being beneficial is minimized as racial desegregation did not *ipso facto* bring integration, so it is with regular class placement.

In the process of evaluating the project reported herein, it became increasingly evident that the impact of mainstreaming goes well beyond the children returned to the regular class (Meyers, MacMillan, & Yoshida, 1975) to affect several groups of children, including the following:

(1) The children who are declassified as EMR and mainstreamed as a result of a shift in IQ for defining mental retardation (i.e., shift from 1 to 2 SD below the mean; roughly from IQ 85 to IQ 70).

(2) The EMR children who were not declassified and remain in a self-contained special EMR class with presumably intellectually less capable classmates on the average.

(3) Regular class children into whose classes the declassified EMRs have been placed.

(4) The more recent cohorts of children with IQs between 70-85, a range which in the past permitted classification as EMR had they encountered learning problems, but not now because of change of IQ guidelines.

The above reflect the actions of California, but are probably applicable in varying degrees to other settings. The point to be made is that mainstreaming affects children other than just those mainstreamed, and furthermore impacts every aspect of general education and the personnel involved.

Form of Mainstreaming Employed

In the present report the children involved were classified as EMR children and, prior to the legislative actions, educated in a self-contained special class. Hence, when the term mainstreaming is used in presenting results of this study it is only applicable to EMR children--not learning disabled, emotionally disturbed, or other groups of children served by special education who could, and have been in other efforts, mainstreamed. In brief, the present report deals with one attempt to mainstream formerly EMR children.

The flavor of the court cases that precipitated the California legislation, and the specifics of the law itself called for programmatic elements to be installed to assist the children from the EMR program back into the regular program. The term "transitional" program was used to subsume any delivery system model for delivering needed services to the EMR children as they moved from the special class program back to the regular education program. The looseness of the term "transitional program" led to tremendous variability in the specifics of implementation within any model. Nevertheless, the fact that the state of California attempted to insist that something positive be done beyond mere temporal placement was in keeping with the definition of mainstreaming offered earlier. On the other hand, little guidance was provided districts as they designed programs resulting in insufficient planning for determining the intensity, content, and location of educational services in individual cases, nor was the provision of transition education mandatory on the districts.

In a recent working paper describing the activities of the Intramural Research Program of BEH-USOE, Kaufman (1975) described the problems inherent in attempts to evaluate mainstreaming programs.

> The difficulties involved in specifying meaningful and measurable treatment variables in mainstreaming research are even more formidable than they have been for research on segregated special classes. Not only are all of Kirk's criticisms regarding the "efficacy" research applicable to mainstreaming research, but, in addition, mainstreaming has its own unique complexities. To illustrate, mainstreaming services present the researcher with a perplexing problem regarding the teacher as a "treatment" variable. Typically, the special education teacher fulfills a variety of concurrent roles and functions regardless of the descriptive label assigned: educational statistician (Buffmire, 1973); diagnostic/prescriptive teacher (Prouty, & McGarry, 1973); or consulting teacher (McKenzie, 1972). Specifically, these multiple functions include direct instruction to pupils instructional assistance to the regular classroom teacher, assessment, and/or prescription. In addition, the special education teacher's direct instruction of children differs in both intensity and content, depending on the pupil's educational needs. Moreover, delivery of the instructional services may occur in a variety of locations, such as a resource classroom or regular classroom. (pp. 28-29)

Given these complexities, the inappropriateness of a between-groups paradigm is obvious, rendering comparisons of various models questionable in light of the external validity of any findings.

Much of the discussion in the professional literature and presentations at conferences on delivery systems for mainstreaming has come since California's move to transition thousands of EMR children. As a result, the transitional programs established were done so prior to the extended descriptions of models which came subsequently in the literature. Nevertheless, the models used in California tended to follow rather closely the models that were to be tried elsewhere in the 1970's. Following is a description of some of the major mainstreaming models to the extent that they are presently refined. It will be noted that some are more comprehensive than others, and in all probability vary within models as a result of child characteristics, situational variables (ecological differences, buildings), and the skills of the teachers involved.

Transitional and/or Mainstreaming Models

While the current Zeitgeist in special education is mainstreaming the recency of its development means that there is limited extant research. The only large scale evaluations of mainstreaming are Project PRIME (Kaufman, Semmel, & Agard, 1973) and the project reported herein.

Two major types of models for mainstreaming children emerge from the literature: (a) resource rooms, and (b) resource personnel. Each of these has variations, almost infinite in number, with modest differences one from the next. Following is a description of the more common models encountered in the literature along with some specification of their more salient features.

Resource Rooms

Wiederholdt (1974) defined the resource room as "any special education instructional setting to which a child comes for specific periods of time on a regularly scheduled basis for remedial instruction." This definition is general enough to include most variations of this model, though some important differences among them should be discussed.

Self-contained resource room. One type of resource room is essentially the familiar self-contained special class, where the child spends as much as half or more of his time; the rest being spent in classes with his normal peers (Guerin,& Szatlocky, 1974; Keogh, Levitt, Robson, & Chan, 1974; Wiederholdt, 1974). In this setting, the child often participates in special class instruction for academic subjects and is integrated with normal students for non-academic subjects such as physical education and woodshop. Keogh et al. (1974) noted that some California districts established self-contained classes especially for transition students. The literature is devoid of data regarding the efficacy of this type of model, probably because it does not represent a significant variation from old special programs. However, it must be recognized that some students will be found to be incapable of functioning in classes for normal students. For these children, this type of instructional setting may be the most useful. Keogh et al. (1974) reported that some such students have been placed in EH, or some other type of full time special placement, when it was determined that they no longer qualified for EMR classes. The obvious question to be asked in such instances is whether these children are being "transitioned" or "recategorized" into alternate special education categories when they could no longer remain classified as EMR.

From another viewpoint, special class placement as a part-time or temporary measure may be seen as one step in a sequential process of moving the child into the mainstream (Grosnick, 1971; Gallagher, 1972; Tavlor, Artuso, Soloway, Hewett, Quay, & Stillwell, 1972). Gallagher (1972) suggested that in this context a contract be developed between the child, his parents, the special class teacher and the regular teacher. This nonrenewable contract would outline the skills to be acquired by the child in the special class within a specific time period prior to placement in a regular class. When this was accomplished the child would be returned to the regular class--but not until. The Madison Plan (Taylor et al., 1972; Taylor,& Soloway, 1973), provided for children to progress through three stages leading to total integration; first within the special classroom, then partial integration into the regular program, and finally total integration.

This model is characterized by short-term segregation with intensive remedial efforts designed to develop skills (academic and social) that these children need to succeed in a regular class. By themselves, such models do not provide for support in the regular class except during a "staging" effort such as in the Madison Plan. Instead, the approach assumes the child will acquire sufficient skills in the resource room to enable him to function independently once he is totally integrated back into a regular class. Unfortunately, there is no substantive research information to confirm or deny the efficacy of these types of efforts.

Integrated resource rooms. Another variation of the resource room model views the child as very much an active participant in the regular program. Here, the resource room is used for brief periods of remedial instruction on a regular basis (Guerin, & Szavlocky, 1974; Keogh et al., 1974; Sabatino, 1972). Within this model, children participate as fully in the regular program as possible. The purpose of the resource room is to help the child remediate educational deficits and to provide sufficient support to enable him to function adequately in the regular class (Guerin, & Szavlocky, 1974; Reger, & Koppman, 1971; Sabatino, 1972; Wiederholdt, 1974).

Though research on the efficacy of this model is minimal, conflicting, and plagued with methodological problems, the proponents note the following as benefits:

(1) Labels are removed.

(2) Segregation is reduced.

(3) Resource rooms are less expensive than special programs.

(4) Both normal and regular children benefit from maximum integration.

(5) Services are readily available.

(6) Resource instructor and the regular teacher work together.

Several of these purported benefits might be challenged. For example, labels do not seem to be removed in all instances -in fact, it may be in a minority of cases. Or labels change; as in the California program, children were often relabeled EMR-T (for transitional). This may not be any less stigmatizing. The issue of segregation seems academic. As MacMillan et al. (1974) noted, it may be that designating the child as "different" whether this is done by segregation or by sending certain children to a resource room, the hypothesized detrimental effect may be similar. Finally, the question of cost efficiency remains to be settled. Some of the early data from Project PRIME tend to show the resource teacher to be a very expensive model. Hence, the benefits hypothesized have not been verified with actual results.

The term "noncategorical" has introduced some confusion with regard to resource models because of conflicting interpretations over meaning. Reger (1972) and others (e.g., Tenorio, & Raimist, 1972) suggested that resource room services should be provided on a noncategorical basis, meaning that mildly handicapped children with different types of disabilities should be served together. Others (Affleck, Tehning, & Brow, 1973;

Hammill, 1972; Hammill et al., 1972) indicate that these noncategorical services should be extended to include not only mildly handicapped children entering the mainstream, but also low achieving normal children. Though the need for additional services for all children with learning difficulties is recognized, practical problems arise with regard to funding and accountability if services are extended to those outside the eligible categories for special education.

Resource Personnel

Models for resource personnel are highly varied. Resource people are diverse not only in the roles they fill, but also in terms of their training and experience. However, the literature has tended to concentrate heavily upon either specially trained resource personnel or former special education teachers as resource teachers.

Resource teacher. Though not all writers have specified who the resource teacher should be, several have suggested that the former special education teacher should assume this role (Cartwright, & Cartwright, 1972; Hafner, 1972; Lilly, 1970; Mercer, 1974; Sabatino, 1972). Lilly (1970) and others (Cartwright, & Cartwright, 1972; Snapp, 1972) have suggested that in this new role, the special education teacher should act as a teacher educator for regular teachers. The goal is to aid the regular teacher in developing skills necessary to cope with the special child in the regular class setting. As a result, the focus of the resource teacher's efforts is not directly upon children, but rather upon their teachers.

One might question the suggestion that former teachers of EMR classes serve as resource teachers, particularly without additional training. First, if these teachers did not possess the skills necessary to bring about desired changes in the self-contained EMR class, what are they going to suggest to regular teachers or do with the same children in a resource arrangement? This seems to assume that by relabeling, that teacher suddenly will gain new insights. Furthermore, the teacher of the EMR enjoyed little status in the eyes of regular class teachers (Jones, & Gottfried, 1966), a factor which could inhibit their interaction with regular class teachers when cast in the role of the resource teacher.

Others (Hafner, 1972; Sabatino, 1972) see the functions of the resource teacher as more diversified. In addition to providing support and training for teachers, they are expected to provide direct services to children and to parents. Direct services to children can be provided in at least two ways. The child may receive remedial and supplemental instruction from the resource teacher which is directed toward the goal of functioning adequately in the regular program (Reger, & Koppman, 1971). In this type of situation, the goals for the child are established by the regular teacher, while attainment of these goals is facilitated by the resource teacher.

By contrast, the roles of the regular teacher and the resource teacher may be reversed. The resource teacher may be the one responsible for diagnosing the child's learning problems, prescribing a program to remediate deficits, and working closely both with the child and the regular teacher (Buffmire, 1972; Prouty, & McGarry, 1973). Here again, however, one encounters a paradox. In the criticisms leveled at the process of diagnosing EMR in terms of the front-ended nature of the school psychologist's role--considerable assessment and little prescription. In the diagnostic-prescriptive model, the question raised by MacMillan (1975) pertained to what was going to be prescribed when in the part we did not apparently know how to teach these same children when they were in an EMR program. Here, the goals are determined by the resource teacher and the regular teacher provides assistance in attaining them.

Resource consultant. Though not often seen in practice in California (Keogh et al., 1974), one of the most frequently advocated models for resource personnel is the resource consultant. The person who fills this role may be expected to have graduate training, in addition to specialized credentials (Buffmire, 1973; Fox et al., 1973; Prouty, & McGarry, 1973). Though the responsibilities of the resource consultant may not differ much from those of the resource teacher, there is the recognition that advanced training and experience are necessary for successful functioning. As Hammons (1973) noted, it is not realistic to expect regular teachers to accept former special education teachers as consultants, especially in light of the current feeling that it is these educators who have failed in dealing effectively with handicapped children in special classes. As a practical matter however, there are not many qualified consultants available at present (Prouty, & McGarry, 1973) and school districts are forced to make do with available and existing personnel.

Though the consultant may work directly with children as a diagnostic/prescriptive teacher, the major focus of attention is upon aiding regular teachers in developing the competencies necessary for coping with mildly handicapped children in their classes (Buffmire, 1973; Fox et al., 1973; Lilly, 1971; Prouty, & McGarry, 1973). A typical example of the range of duties expected of the consultant may be found in examining Buffmire's (1973) model of the "Stratistician":

> The stratistician provides an active interface between regular and special education by establishing a continuum of educational services for the handicapped child. At the same time he is a data collector, an identifier of problems faced by teachers and handicapped children in the classrooms, and a developer of resources to solve the problems. He also collects data for the development of inservice and preservice training packages. Withal, the prime target of the stratistician is the classroom teacher. (1973, p. 5)

Whether or not such a model is successful or even realistic remains to be seen. Certainly, the demands are great.

Paraprofessional models. Though rarely, if ever, mentioned in the literature, the most widely used model for resource personnel found in California is based upon paraprofessional aides (Keogh et al., 1974). These aides work directly with mildly handicapped children placed in regular classes as tutors on a regularly scheduled basis. Within this model, the responsibility of the resource person varies: to provide supplemental support and remedial tutoring to mainstreamed children either individually or in small groups, to assist the teacher with bookkeeping and supervisory duties, or to work with larger groups thereby allowing the teacher to work intensely with specific children (Jones, & MacMillan, 1974). The purpose is to help children function adequately in regular classes, and/or to release the teacher in order that the mainstreamed children can be worked with by the regular class teacher.

It was interesting to note that as the qualifications of the resource person increase, the emphasis on direct child contact decreases. However, the reasons for employing paraprofessionals as resource personnel are obvious. Several aides can be hired for less money than it would cost to hire one consultant. Thus, while the level of training and background may not be high, children are assured of receiving individual attention at a price the district can afford.

Other Assorted Models

While the predominant models used in delivering services to mainstreamed children are the ones described above, there are others that are occasionally found in the literature or were allowed under the California legislation for receiving excess costs.

In addition to paraprofessionals, nonprofessionals have beer used in the form of cross-age tutors. Keogh et al. (1974) reported one California district which used high school students to tutor elementary pupils. Jenkins, Mayhall, Peschka, and Jenkins (1974) suggested that cross-age tutors may be an effective means of providing mildly handicapped children with needed help. Other forms of extra or additional support came via a teaching specialist (speech, language, and hearing); while a substantial number of declassified EMRs were reclassified as EH or TMR (Keogh et al., 1974). Still other districts (17% of the districts sampled), simply placed the children back into regular class while providing no ancillary support.

The prototypes encouraged as California school districts included some of the models previously discussed (Resource Learning Center, Consulting Teacher, Ancillary Teacher Assistants), but also included alternatives seldom considered models for mainstreaming. Included were:

(a) In-service Training Programs. For all teachers who have transition pupils in their classes. Such programs might include instruction in writing behavioral objectives, behavior modification techniques, methods of recognizing unique learning styles, and adapting classroom instruction.

(b) Pupil Personnel Consultants. Providing counseling for individual or groups of pupils as well as consultation for teachers and parents.

(c) Bilingual Consultants. Teachers and/or aides for those with limited English-speaking ability.

(Memo from Eugene Gonzalez & Leslie Briregar, April 13, 1971)

These last three are questionable as models, however, were legitimate services for qualifying a school district in California for excess funds under the transitional program. The efficacy of any of these approaches has yet to be explored.

Summary

In this chapter, the arguments presented against the use of self-contained special classes as the model for delivering services to EMR children were reviewed. In addition, research evidence bearing on these criticisms was reviewed, and generally found to be inconclusive. That is, the research supports neither those who would argue that the special class is better or worse than the regular class. Furthermore, all research evidence on the effects of labeling, the bias in intelligence testing minority children, the "self-fulfilling prophecy," and the efficacy of special vs. regular classes fails to support conclusively the critics or the defenders of the special class.

Regardless of the goodness of the research evidence, the Zeitgeist is clearly toward "mainstreaming" of mildly handicapped children. The lack of agreement pertaining to the precise meaning of mainstreaming was explored and a working definition offered.

Finally, an attempt was made to describe the alternative models available for transitioning EMR children back into a regular class. It was noted that validating data are yet to be collected on the various models offered to date.

CHAPTER III

Purpose and Rationale of the Project

The previous chapter has reviewed much of the history leading to the present. We may take up the picture in California as of about 1970, in the middle of the period in which a massive reassessment of EMR students was in process, followed by the decertification and return to regular programs of nearly half of such students. The doubts about segregated education for the EMR had not been sufficient to move the legislature to provide some middle-ground educational program for marginal-level learners. But the proximate source of the wholesale decertification was not educational need in its own nature, as we review in the previous chapter. It was the civil rights activity engineered under the appreciation that EMR identification was highly overrepresentative of Black and Spanish-surnamed students. The civil rights issue was thus superimposed upon the smoldering doubt about educational adequacy of the EMR program. The issue became one of reaction to the student's label and stigma as mentally retarded, this labeling being presented in court as having been done by ethnically biased means (use of white-middle class culture-loaded intelligence tests). Court mandate or agreement was followed by legislative enactments, accelerating change which had been too slow to come otherwise. The courts in such actions as Diana (1970) and Larry P. (1972), made such determinations as these:

(1) Placements into EMR of many minority students were determined to have been effected with biased instruments.

(2) Prompt reassessment with nonverbal and/or with translated instruments of all EMR students was to be carried out.

(3) Segregated and labeled special education was found to be debasing and stigmatizing. To call a person "retarded" put him into a suspect class. There must be a preponderance of reasons why a system should so stigmatize a person.

(4) Placement in an inferior educational program (that is to say, EMR) was found to further deprive the person through denying him his best opportunity to show that he was improperly labeled.

(5) A program to assist students in their regular class education was to be developed.

(6) Districts would in the future have to make explanations of continuing disproportionate representation of minority students in segregated classes.

Court mandates and agreements between litigants and the defendent school authorities (local and state) led to a succession of legislative enactments. In addition to providing for reassessment and the use of "nonbiased" instrumentation, the State also changed guidelines for cut-off IQ for admission, from the previous maximum of 75 (plus or minus an error of measurement, thus up to and including 79) to two standard deviations below the mean, this normally meaning a maximum of IQ 68 on the Binet and 70 on the Wechsler scales, again with allowance of some error of measurement. The effect was to reduce EMR registration in California by somewhere between 11,000 and 14,000 cases in a couple years of time, the uncertainty being due to no one's knowing (a) how many reassigned students were cases of pending placement but not placed in view of new guidelines, (b) how many were removed without formal decertification, and (c) how large was the normal proportion of school leaving or graduation.

Rationale. This massive shift occurred primarily in the period 1969 through 1972. The shift redefined "EMR," in effect changing the nature of a student by such legislative enactment. The change was one of labeling and not one based upon educational need. Of the mandated and/or legislated changes, only that which addressed itself to the provision of "transition" programs was concerned with education as such, and this one only in attempting to provide some assistance to help a student deemed to be a normal learner by law to get along in regular class.

It is emphasized that there appeared to be no regard in the courts for the fact that the typical EMR student had had his one or more years in regular education and had been a serious failure in it; it was seemingly assumed he should now succeed where before he had failed. The naïveté of the assumption guaranteed that there should be some interesting consequences. The change experienced so dramatically in California was occurring all over the United States, making it of interest to monitor the nature of and consequences of such reassignments to regular class.

Nothing in the above is intended to imply that the students had been ideally served by the previous segregated placement. The EMR class had been created to help those of marginal learning characteristics to obtain academic competence under special small class instruction--the intent was good even if the result was in doubt. Many psychologists and special educators had increasingly clamored for a more integrated, nonstigmatizing kind of program; in California, for example, the so-called "supplemental education" program was developed on a small scale, and its implementation was very much like that developed in the present time (California, 1975) in the so-called master plan.

Nevertheless progress was slow, and the screaming fact of ethnic disproportion (see Table 5.1, Chapter V) could not be denied. The court mandates, resting upon a simplistic medical model ground which assumed the only basis for placement was an IQ, accelerated change which was so slow to attain by normal legislative enactment.

The logic of this study, then, and the basis for requesting and securing funds, was that the thousands of reassigned former EMRs constituted a large natural experiment which should be monitored for the mainstreaming wisdom which might accrue, to the benefit of other locations. Initial steps to apply for funds to make a study of the decertified in California were undertaken in the period 197[illegible]-72 [illegible] decertification was still occurring and litigation was still in process. Funding was finally obtained, the study technically initiating on May 1, 1973.

Purpose. Several lessons could be learned by a study of the decertified students. They are reflected in several questions pertaining to: (a) The bases districts used for juding some children as being "normal" in the sense of not being EMR any longer and presuming they could well succeed in regular class. (b) The study of factors or traits which led to the identification as EMR in the first place, comparative between those later decertified and those left in. (As data will show later, about 45% of the reassessed were decertified.) (c) What may be experienced as to the impact of the return not only on the student but upon his teacher and the regular class classmates. Did the peers accept? What became of the social status? Were parents pleased? How did the teacher perceive his or her role? How did they view the whole process? (d) How many have "succeeded" upon their return according to various criteria: measured academic achievement; teacher judgment; staying in school vs. dropping out or being forced out. (e) Can anything be learned about models of transition assistance, or is that too highly convoluted with mixed and changed models to provide any usable information? (f) What from the standpoint of huge system change can be learned as lessons? How did districts, individual school units, teachers cope? (g) What in the district's history of provision for individual differences (whether for retarded students or not) permitted them to assimilate the mandated-reassigned students? (h) What models or principles did districts develop from the experience as a profit for use into the future?

It is well at this juncture to restate a point made at the end of the preceeding chapter: What about those children, now experiencing learning failures early in their formal educational careers like those experienced by the decertified EMRs, who cannot be identified under the new guidelines? Our purpose could not review their educational progress, except that we were able to insert a question or two into a teacher questionnaire, and to inquire informally about the matter in district contacts.

The purpose of this study was to attempt to answer as many of the above questions as possible. This purpose was implemented by identifying the complete list, where possible, in selected California school districts, of those in EMR classes in the period 1969-72, and to determine from these records which students had been decertified and which not, and to make comparative studies of their educational progress, as well as to make comparative studies of the educational status of matched, never segregated classmates of the decertified. The implementation was to be accomplished by securing not only academic data but also personal-social data such as could be provided by teacher questionnaire and the study of cumulative records, dependent upon the status of such records and school district rules for access to them. The implementation would be completed by adequate publication of the findings, together with feedback reports to all participating districts, other interested districts, the State Department, and the Los Angeles County Superintendent.

CHAPTER IV

Method

Sampling Design

A related study was funded by the California State Department of Education to analyze and report on problems of organizing and administering certain special education programs (Keogh, Levit , & Chan, 1975). That study used a sampling design previously developed by Keogh, Becker, Kukic, and Kukic (1973) which selected school districts statewide to represent variation in density of ethnic groups, community SES, and enrollment size. The present study selected from the Keogh et al. (1973) design ten unified school districts as follows: Compton, El Rancho, Inglewood, New Haven, Pittsburg, Oakland, Redlands, Santa Ana, Walnut Valley, and Hayward. Hayward asked not to be included in the present study and was substituted for by Pomona which had approximately the same average daily attendance and ethnic proportions. Two administrative areas of the Los Angeles Unified School District were added to the sample, one of them inner-city Black, the other, representative of the Los Angeles as a whole in SES and ethnic distribution. For purposes of analysis they were considered districts because of their size and relative independence from the central Los Angeles administration. Table 4.1 lists all districts in the study, together with such characteristics as enrollment data and ethnic proportions. The description of two administrative areas of Los Angeles is given along with that of the entire district. The districts are numbered 2-13 rather than named in all presentations of this report. There is no "No. 1" district. In short, twelve unified school districts composed this revised sampling design which was developed to yield data for conclusions a) about the state as a whole, b) about type of districts, and c) about each district selected. The specific uses of these designs follow.

Sampling the state. To characterize the decertified children of the state taken as a whole led to a choice among three options, of which only the third was feasible. a) Sampling among all the state's decertified: impossible from a labor and expense point of view. b) Identifying representative districts and sampling proportionately among their decertified: also not feasible. c) Identifying representative districts, and in each, random sampling enough cases to yield a reasonably valid picture of that district's decertified students aiming if the district were not too large for about a third of the available decertified.

The third alternative was the feasible one with exceptions noted below. The districts were selected to represent giant size down to very small, to represent both northern and southern California and to show different ethnic mixes (see Keogh, Becker, Kukic, & Kukic, 1972). To some extent the selection was biased toward securing districts within commuter range of the two largest population zones, Los Angeles and San Francisco. Districts were not sampled in the third and fourth largest

Table 4.1

Size and Ethnic Breakdown of Districts in the EMR Decertification Study in California, 1972-73

District	Total No. of Students	Ethnicity Percent			Other non Whites	Number of EMRs	Ethnicity Percent		
		Anglo	Black	Spanish-surname			Anglo	Black	Spanish-surname
Los Angeles-Total District	615,673	46.0	25.2	23.9	4.9	7,370	19.3	57.3	21.8
2	60,804	11.6	82.8	4.7	0.9	1,267	--	--	--
3	57,530	65.4	10.1	22.8	1.7	320	14.2	31.4	54.1
4	21,993	62.6	19.1	17.2	0.6	276	39.8	39.7	18.4
5	41,204	4.7	83.0	11.4	0.5	1,050	1	90	8
6	17,422	33.5	0.0	65.8	0.7	101	30	0	70
7	16,139	61.8	24.8	10.9	2.5	69	40	42	18
8	6,000	59.2	1.5	37.2	2.2	31	48	3	45
9	61,307	22.3	56.9	8.8	6.0	1,319	6	86	6
10	6,140	50.6	28.1	21.7	0.8	101	24	55	19
11	12,574	77.7	2.6	19.2	0.6	68	44	4	51
12	28,549	56.8	8.2	33.1	1.0	128	35	19	45
13	4,910	89.3	0.4	9.2	1.1	8	100	0	0

Source: California Public School Directory, 1973 zones, San Diego and Sacramento. Also excluded were so-called union high school districts (i.e., high school only), and separate elementary-only districts. It would have been extremely difficult to secure follow-back information on pupils across two districts. Most California students are enrolled in unified districts.

Sampling certain categories of districts ("blocs"). It was not possible to sample well within a number of strata of district types but the sampling included districts with mixed or a single preponderant ethnicity. Given certain assumptions, the data provided information about: a) an ethnically mixed group of students from a portion of a giant metropolitan center, b) two essentially all-Black, low SES "inner city" districts, c) an ethnically mixed district of medium size, and d) a number of primarily Black or primarily Spanish-surname districts with some variation in district size and SES characteristics.

Data for individual districts. For the twelve districts, sufficient sampling was made in each district so that data were sufficient in their own right to give a district a dependable but general story of its own decertified students, including a 100% sample of the two smallest districts. Random sampling of most districts' cases could not yield enough cases to permit interactional studies though sampling was expanded beyond the random numbers in District 3 (henceforth, coded numbers are used to identify districts) to fill cells for a stratified-random sample design with program level (elementary, junior high, and senior high), and ethnicity as factors in the design.

Besides characterizing its own experience, the district sample is entered into a) the State-as-a-whole characterization and b) the type-of-district characterization.

Summary statement on sampling the decertified students. The above sampling design may be summarized as follows:

I. State-as-a-whole. Random sampling of decertified in each district in the study.

II. District types

- a. Inner city Black, low SES: Districts 2, 5, and 9.
- b. Mixed ethnicity: Districts 3, 4, and 12.
- c. One preponderant ethnicity: Districts 6, 7, 8, 10, 11, and 13.

III. Each district. Random sample for complete cases in all districts and a stratified-random sample of program level by ethnicity in District 3.

Sampling within the decertified and contrast groups. The study focused on the students who were decertified and assigned to another program, regular class or otherwise. Two contrast groups were selected as well. Accordingly, the three groups are as follows:

1) The decertified or D group. These were EMR students who had been decertified from EMR registration under new state guidelines between the 1969-70 through 1972-73 academic years, the period of immediate reaction to the state mandate. Only those students who were decertified by district initiative were included, whether or not they were enrolled in a funded transitional program. Those students decertified upon parent requests for reassessment and removal from EMR class were excluded. The D student must also have been enrolled in an EMR program for at least one academic year.

2) The non-decertified retarded group or EMR. The logic of this sampling was to determine whether the non-decertified EMRs of similar basic characteristics have or have not enjoyed as much success as the decertified student. The EMRs who were not decertified during the 1969-72 academic years or who were placed into EMR programs under new state guidelines during that period were randomly selected to be matched with the D student according to their 1973-74 academic year program level (elementary, junior high school, senior high school) without exception and, ethnicity and sex in that order of priority where possible. The EMR must also have been enrolled in an EMR program for at least one academic year.

3) The regular class contrast group or RC. Within the same classroom as the sampled D student, a contrast was a never referred, never labeled student who was randomly selected from a group of regular students of the same ethnicity and sex in that order of priority where possible as the D student and nominated by his or her teacher (who was not informed about the nature of the study) as being in the lower half of his class in achievement. In cases of departmentalized programs (mostly in junior and senior high school) the RC student was selected from the English or Remedial Reading class if available, otherwise from Mathematics or Social Studies classes. The chief logic for having this RC group was to provide a control within a D-RC pair over the teacher factor in response to the questionnaire the teacher completed and in the teacher's marks and the cumulative record notes. In instances in which the D student had been placed in a program for the educationally handicapped or learning disabled, the contrast student was randomly drawn from that group with control over ethnicity and sex where possible.

Subjects

Subject selection procedure. Lists of students registered in EMR classes from the 1969-70 to 1973-74 academic years were compiled. Each student's psychological record was reviewed to verify EMR recommendation and placement, formal district initiated reassessment between the 1969-72 academic years, as well as demographic characteristics as ethnicity, sex, birth year and psychometric data. Students were included only if they were born between 1956-62 in order to eliminate students who had left school because of age before the initiation of the present study.

The above procedure was conducted in all districts except three (2, 5, and 9). These exceptions were due to: a) political problems which plagued one district, including the assassination of the superintendent, b) a teacher's strike which delayed access to another, and c) excess cost in another due to an EMR population during the 1969-72 period estimated at over 5,000, making the verification procedure too expensive. Accordingly, a less exhaustive list was developed in each of those three districts: only samples of currently enrolled D students who received funded transition assistance, and EMR students, were found in two districts while in the third the population of D students receiving transition aid and a random sample of all EMRs enrolled in the district from 1969 to the present were listed.

Decertified and non-decertified EMR populations. Table 4.2 develops information in the selected districts (except nos. 2, 5, 9) on the complete numbers of EMRs who were available for decertification from 1969-72. A total of 4529 students were said to have been enrolled in EMR classes during this period. Of these, 1261 were eliminated from the subject pool because their decertification came through parent pressure rather than the mandate of law or was a case of doubtful EMR authenticity or was born outside the set chronological age limits. The remaining 3278 cases represent the total EMR population subject to reassessment and possible decertification, in the period 1969-72. The table divides them into two groups: the Ds (n = 1711) and the non-decertified EMRs (n = 1567).

Table 4.3 presents the ethnic and sex proportions and the chronological ages of the D and EMR populations in the 12 districts. For both groups, students were typically members of the minority groups (Black, Spanish-surname) even in districts with a heterogeneous ethnic mix in their district-wide student bodies such as Districts 3, 4, and 12; Districts 8, 10, and 11 had sizeable proportions of Anglo students in both the D and EMR groups. The proportions of males in the two groups ranged from 47.4 percent to 78.6 percent (excluding District 13 with its small n's); the median proportion of males was 56.7 percent. The district mean chronological ages (CA) of the two groups ranged from 13.83 to 16.00 years with the median equal to 14.80. The standard deviations for CA were typically less than 2.00. In short, the modal student in the D and EMR population may be characterized as a minority group member, male, and attending a junior high school.

Tables 4.4 and 4.5 present a psychometric description of the two groups by district with the mean Binet and Weschler Intelligence Scale for Children (WISC) Full-Scale IQs at the time of EMR recommendation and decertification. Other individual intelligence test scores (Leiter, Weschler Adult Intelligence Scale) were available but too few in number to be meaningful. At the time of EMR recommendation, the medians of the districts' mean IQ and standard deviation for the D students were: Binet, 70.05, 6.52; WISC, 71.09, 5.75, respectively, and for the EMR student: Binet, 66.78, 7.35; WISC,

Table 4.2

Basic Population Data for Statewide School Districts Pertaining to Decertified and Non-Decertified Students

	2	3	4	5	6	7	8	9	10	11	12	13	Total
Complete EMR Lists for 1969-72 School Year	1234[a]	1123	539	178[b]	241	189	98	160[b]	129	160	473	15	4529
Students of Doubtful Authenticity	347	301	213	14	88	50	32	2	30	37	141	6	1261
Total EMR Population Subject to Decertification, 1969-72	887	822	326	164	153	139	66	158	99	123	332	9	3278
Decertification by Mandated Assessment, 1969-72	678	424	134	52	70	36	30	41	20	76	146	4	1711
Not Decertified, 1969-72	209	398	192	112	83	103	36	117	79	47	186	5	1567

[a] The decertified students were only those who received funded transitional aid; the non-decertified EMRs were randomly selected from the available pool of EMRs from 1969 to 1973 academic years.

[b] Both the decertified and non-decertified EMRs were randomly selected from available decertified students.

Table 4.3

Ethnic and Sex Proportions and Chronological Ages of
Decertified and Non-Decertified EMR Populations in Project School Districts

Decertified	2	3	4	5	6	7	8	9	10	11	12	13
N	678	424	134	52	70	36	30	41	20	76	146	4
% Anglo	0.0	21.5	18.7	0.0	12.9	8.3	43.3	2.4	40.0	35.5	4.8	50.0
% Black	97.9	26.4	39.6	90.4	0.0	77.8	6.7	90.2	40.0	5.3	6.8	0.0
% Spanish-surname	1.0	45.0	41.0	5.8	82.9	8.3	43.3	0.0	20.0	57.9	57.5	50.0
% Unknown (other)	1.0	7.0	0.7	3.8	4.3	5.6	6.7	7.3	0.0	1.3	30.9	0.0
% Male	68.1	60.8	56.0	53.8	55.7	55.6	63.3	73.2	65.0	47.4	58.2	100.0
% Female	31.1	39.2	44.0	46.2	44.3	44.4	36.7	26.8	35.0	51.3	41.8	0.0
% Unknown	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Chronological Age Mean	14.50	15.02	15.79	15.73	14.83	13.83	15.13	14.07	16.00	14.11	15.19	16.25
Non-Decertified												
N	209	398	192	112	83	103	36	117	79	47	186	5
% Anglo	1.0	32.4	38.5	0.9	19.3	18.4	55.6	5.1	21.5	44.7	10.2	100.0
% Black	74.6	25.6	43.2	95.5	0.0	47.6	2.8	86.3	55.7	2.1	12.9	0.0
% Spanish-surname	3.3	33.9	17.2	1.8	73.5	14.6	38.9	0.9	16.5	48.9	40.9	0.0
% Unknown	21.1	8.0	1.0	1.8	7.2	19.4	2.8	7.7	6.4	4.3	36.0	0.0
% Male	57.4	57.8	55.7	55.4	51.8	54.4	50.0	78.6	58.2	51.1	64.0	40.0
% Female	42.6	42.0	44.3	44.6	47.0	44.7	50.0	20.5	41.8	48.9	36.0	60.0
% Unknown (other)	0.0	0.3	0.0	0.0	1.2	1.0	0.0	0.9	0.0	0.0	0.0	0.0
Chronological Age Mean	15.17	14.76	15.02	15.60	14.68	14.32	14.67	14.20	14.70	14.28	14.83	12.60

Table 4.4

Mean Binet and WISC Full Scale IQs of Decertified and Non-Decertified EMR Students in Selected School Districts at EMR Recommendation

Decertified	2	3	4	5	6	7	8	9	10	11	12	13
Binet IQ												
Mean	71.01	71.13	71.48	69.81	67.04	69.20	64.00	69.47	64.00	77.67	70.29	74.00
SD	5.33	4.88	5.82	5.53	6.93	7.41	12.18	6.12	10.00	7.51	5.12	7.07
N	621	326	73	37	23	25	7	19	3	3	42	2
WISC-Full Scale IQ												
Mean	70.64	69.86	72.23	69.30	71.09	71.08	71.33	68.32	72.53	71.87	70.69	71.33
SD	6.24	5.64	5.86	5.01	7.31	5.60	5.34	6.24	4.22	5.14	5.96	10.97
N	25	50	44	10	43	12	21	22	15	38	99	3
Non-Decertified												
Binet IQ												
Mean	68.01[a]	65.99[a]	68.68[a]	67.13[a]	67.28	65.43	63.58	66.61	66.96	64.17	63.71[a]	70.00
SD	6.60	7.45	8.06	6.33	6.05	10.44	7.26	6.99	9.09	8.82	8.37	4.24
N	205	376	80	64	25	70	12	69	27	12	62	2
WISC-Full Scale IQ												
Mean	69.58	66.62[a]	66.42[a]	64.33	65.02[a]	64.42[a]	64.78[a]	68.85[a]	64.88[a]	65.95[a]	64.73[a]	69.00
SD	4.60	6.80	7.31	7.45	7.61	8.81	7.05	5.69	6.51	6.63	8.45	2.00
N	12	68	96	40	53	48	23	46	48	37	93	4

[a] This mean differed significantly (.05) from the comparable mean for the Decertified group.

Table 4.5

Mean Binet and WISC Full Scale IQs of Decertified and Non-Decertified
EMR Students in Selected School Districts at Decertification Recommendation

Decertified	2	3	4	5	6	7	8	9	10	11	12	13
Binet IQ												
Mean		81.24	77.67			75.89		80.33				
SD		8.19	6.83			3.95		4.66				
N		34	6	0	0	9	0	9	0	0	0	0
WISC-Full Scale IQ												
Mean	78.69	78.42	78.76	78.96	75.64	79.63	77.68	80.34	74.47	76.21	82.00	72.75
SD	6.54	7.59	7.43	7.35	6.21	9.98	8.09	6.28	6.80	4.88	7.50	9.68
N	501	284	126	47	55	19	19	29	17	67	117	4
Non-Decertified[a]												
Binet IQ												
Mean	62.00	66.79	69.00		62.50	62.71			72.50			
SD	6.25	4.00	5.70		9.19	7.71			4.95			
N	3	24	5	0	2	14	0	0	2	0	0	0
WISC-Full Scale IQ												
Mean	62.82	60.43	65.10		63.67	63.15			63.00			
SD	5.55	7.01	8.37		15.80	6.63			7.14			
N	11	46	39	0	18	13	0	0	19	0	0	0

[a] Found for current study samples only.

65.49, 6.93. The medians of the mean IQ and standard deviation for the D student at the time of decertification were: Binet, 79.00, 5.74; WISC, 78.56, 7.39. The IQs at the time of decertification for the EMRs were collected on samples in Districts 2, 3, 4, 6, 7, and 10 with missing data in the remaining districts. The medians of all districts' mean IQ and standard deviation were: Binet, 62.75, 6.93; WISC, 63.08, 7.08.

Sample Section and Characteristics of D, EMR and RC students

Current location of D and EMR students. Ds and EMRs were identified as to current location in selected school districts during the 1973-74 academic year. Table 4.6 presents for the two groups the percentage of those students available and not available for current study. The range of the percentages of enrolled Ds and EMRs for all districts except 5, 9, and 13 was 37.9 percent (District 4, EMR) to 85.3 percent (District 7, D). A study was conducted to determine whether there were any systematic differences or selection biases between the available and unavailable students. To estimate this bias, two basic strategies were implemented. The first was a comparison of demographic and psychometric data such as ethnic background, sex, chronological age, Binet and WISC IQ at the time of EMR and decertification recommendation for the Ds and EMR separately of the students available or unavailable for current study. The second strategy involved contacting the districts to which the unavailable tranferred in order to determine whether these students had enrolled in that district, dropped-out, and so forth. Only a brief summary of the findings is presented here; an extended report with tables is provided in Chapter VII.

For demographic comparisons, the results (in Chapter VII) showed that only 4 of 17 possible chi-square values of the relationship between current location and ethnicity were significant. The four significant values were for a smaller proportion of Anglo students being available than for Black or Spanish-surname. As this phenomenon did not occur in other districts with adequate numbers of Anglos, it was judged to be due to a district-specific cause (in one clearly known case, there had been moving out of Anglo families over recent years) and not something pertaining to the key variables of the study otherwise. Only one significant sex difference in 17 possibilities was obtained. Only six of 17 CA comparisons were significant, the CA of the unavailable group being older in five instances. This finding is not surprising considering the rate of early school leaving as the maximum compulsory attendance age is neared or attained. Comparisons were made on Binet and WISC IQs for both D and EMR at the time of EMR recommendation and on WISC at the time of decertification for Ds only. Only 3 of 39 possible comparisons were significant, in the direction of higher IQs for the unavailable students. In short, availability for current study in either the D or EMR groups did not generally appear to be related to ethnicity, sex, CA or IQ in any way requiring allowance in interpreting results.

The second mobility study was effected by follow-ups of random samples of the unavailable students. In general, this study also failed to reveal any reason to question the representativeness of the information secured on available subjects. Of interest was the finding that the in-California

Table 4.6

Current Location of Decertified And Non-Decertified EMR Students[a]

	Districts											
	2	3	4	5	6	7	8	9	10	11	12	13
Decertified												
N	49[b]	330	133	50[c]	67	34	28	38[c]	20	75	101	4
Percent Available	73.5	57.0	60.9	98.0	67.2	85.3	53.6	100.0	50.0	70.7	72.3	75.0
Percent Unavailable	26.5	43.0	39.1	2.0	32.8	14.7	46.4	0.0	50.0	29.3	27.7	25.0
Non-Decertified EMRs												
N	56[b]	270	190	110[c]	77	83	35	108[c]	74	45	119	5
Percent Available	53.6	48.1	37.9	77.3	51.9	61.4	54.3	100.0	79.7	75.6	40.3	0.0
Percent Unavailable	46.4	51.9	62.1	22.7	48.1	38.6	45.7	0.0	20.3	24.4	59.7	100.0

[a] Anglo, Black and Spanish-surname students only

[b] Only samples of transitional and EMF students

[c] On currently enrolled decertified and EMR students sample

transfers showed a persistence of D students to be registered in regular programs and EMR students to be registered mostly in EMR or secondary in some other special education program.

Description of Samples

Ds were randomly selected from the pool of available Ds for current study from all districts (except no. 9) because of logistical and methodological problems. EMRs were matched to the Ds on the basis of program level without exception and by ethnicity and sex in that order of priority where possible. Finally, a regular contrast student (RC) was randomly selected from the same class as the D student and said to be in the bottom half of his class in achievement. The RC student was also of the same ethnicity and sex as the D where possible.

A total of 833 students were the subjects for the study of current status; 276 were Ds; 281 EMRs; and 276 were RCs. Table 4.7 presents the ethnic and sex proportions of the D, EMR and RC current study samples. The percentage of minority group students, Blacks and Spanish-surname, ranged for the D, EMR and RC groups from 66.0 to 100.0 (Mdn = 86.8), 0.0 to 100.0 (Mdn = 80.0), and 66.6 to 100.0 (Mdn = 84.2), respectively. The unavailability of a proper ethnic match for the D student accounted for the differences in the median minority percentage for each group. The same reason was attributed to the variation in the proportions by sex; males ranged from 40.0 to 77.8 (Mdn = 53.4), d; 42.8 to 66.7 (Mdn = 50.0), EMR; and 39.3 to 87.5 (Mdn = 60.0), RC. Nevertheless, closer inspection of Table 4.7 reveals that the discrepancies were minor in the ethnic and sex proportions for the three groups. Table 4.8 presents the district mean CAs of the three groups. The standard deviations for CA were typically less than 2.00. Table 4.9 presents the psychometric characteristics of the D and EMR groups at the time of initial EMR and subsequent reassessment recommendation. Only Binet and WISC IQs were considered. It was found that Binets were more frequently used than WISC at first testing and the opposite at the decertification reassessment. Exceptions were infrequent, yet the cases could not be excluded from either the sample description or subsequent analysis. Given the high correlation in IQ of the two tests, the IQs from either test were combined to yield a single IQ variable at either time point.

Procedure

Psychological records. Based upon a sample of psychological files from selected districts, a form was developed to collect the following data: ethnicity, sex, birthyear, IQ at EMR and reassessment recommendation, year of placement in EMR class, number of years in EMR placement and the program to which decertified students were transferred. (See Appendix C for sample form.) Each D and EMR student's psychological record was

Table 4.7

Sample Description for Statewide School Districts Pertaining to Decertified, Non-Decertified EMRs and Regular Contrast Students

	Districts[a]										
	2	3	4	5	6	7	8	10	11	12	13
Decertified N	15	58	35	40	25	18	8	9	28	38	2
% Anglo	0.00	27.59	5.71	0.00	28.00	11.11	25.00	33.33	28.57	13.15	0.00
% Black	100.00	34.48	48.57	95.00	0.00	77.78	12.50	44.44	14.29	26.31	0.00
% Spanish-surname	0.00	37.93	45.71	5.00	72.00	11.11	62.50	22.22	57.14	60.52	100.00
% Male	53.33	63.79	48.57	52.50	40.00	66.67	62.50	77.78	42.86	65.79	50.00
% Female	46.67	36.21	51.43	47.50	60.00	33.33	37.50	22.22	57.14	34.21	50.00
EMR N	15	58	35	40	25	18	8	9	28	38	7
% Anglo	0.00	27.59	20.00	2.50	32.00	5.56	37.50	11.11	46.43	15.79	100.00
% Black	100.00	34.48	54.29	95.00	0.00	77.78	12.50	66.67	3.57	18.42	0.00
% Spanish-surname	0.00	37.93	25.71	2.50	68.00	16.67	50.00	22.22	50.00	65.79	0.00
% Male	46.67	55.17	48.57	50.00	44.00	61.11	62.50	66.67	46.43	65.79	42.86
% Female	53.33	44.83	51.43	50.00	56.00	38.89	37.50	33.33	53.57	34.21	57.14
Regular Class Contrast N	15	58	35	40	25	18	8	9	28	38	2
% Anglo	0.00	27.59	11.43	0.00	28.00	5.56	25.00	33.33	25.00	15.79	0.00
% Black	100.00	34.48	57.14	100.00	0.00	88.89	0.00	55.56	10.71	15.79	0.00
% Spanish-surname	0.00	37.93	31.43	0.00	72.00	5.56	75.00	11.11	64.29	68.42	100.00
% Male	60.00	63.79	54.29	52.50	40.00	66.67	87.50	77.78	39.29	73.68	50.00
% Female	40.00	36.21	45.71	47.50	60.00	33.33	12.50	22.22	60.71	26.32	50.00

[a] District 9 could not be included in the current study sample.

Table 4.8

Means and Standard Deviations of Chronological Age (in years)
of Study Samples of D, EMR, and RC Children

	Districts											
	2	3	4	5	6	7	8	9	10	11	12	13
D												
N	15	61	35	40	25	18	8	--[a]	9	28	38	2
Mean	14.60	14.43	16.20	15.65	15.04	13.83	17.50	--	15.78	14.50	15.63	16.00
SD	1.64	2.17	1.69	2.12	2.19	2.41	1.41	--	1.39	2.66	2.16	0.00
EMR												
N	15	66	35	40	25	18	8	--	9	28	32	7
Mean	14.67	14.45	16.26	15.67	15.36	13.22	17.12	--	15.44	14.82	15.37	11.43
SD	1.63	1.90	1.82	2.02	2.31	2.92	1.36	--	2.35	2.04	2.20	2.37
RC												
N	15	61	35	35	24	17	8	--	9	27	38	2
Mean	14.47	15.02	15.49	15.34	15.17	13.88	17.50	--	15.00	14.81	14.71	16.00
SD	1.55	7.23	2.16	1.20	2.01	2.52	1.41	--	1.66	2.51	2.09	0.00

[a] Insufficient data to enter

Table 4.9

Means and Standard Deviations of IQ for Study Samples of D and EMR
Subjects at Time of EMR Placement
and at Time of Reassessment for Possible Decertification

			Districts											
			2	3	4	5	6	7	8	9	10	11	12	13
D	IQ,*	Mean	71.36	70.62	68.70	69.25	70.67	71.17	69.12	--[a]	68.33	69.43	70.26	60.00
		SD	4.58	4.63	7.17	5.54	4.78	5.93	7.38	--	7.60	3.52	5.46	1.41
		N	14	58	33	36	24	18	8	--	9	14	38	2
	IQ_2,**	Mean	79.40	77.16	76.54	79.36	77.05	78.69	75.00	--	75.50	74.20	80.40	52.50
		SD	6.17	7.99	8.73	7.49	6.51	5.79	6.37	--	8.04	3.38	7.79	9.19
		N	10	61	35	39	22	13	8	--	8	25	30	2
EMR	IQ,*	Mean	66.60	66.98	65.79	63.89	65.58	66.37	61.29	--	63.00	65.04	64.86	69.29
		SD	5.33	6.84	8.68	7.81	7.37	7.20	8.50	--	8.90	7.30	8.14	5.41
		N	15	64	33	36	24	16	7	--	9	23	29	7
	IQ_2,**	Mean	62.07	62.67	66.34	62.44	65.59	63.65	--	--	61.89	75.00	58.00	--
		SD	4.76	6.07	9.05	1.53	8.43	6.71	--	--	5.86	5.29	--	--
		N	15	63	35	32	22	17	--	--	9	3	1	--

[a] Insufficient data to enter

*This IQ was obtained just prior to original placement into EMR program.

**This IQ was the one used in deciding whether a child should remain in EMR program or to be decertified.

searched; if it was missing, an additional inquiry was made to locate the file. The data were recorded exactly as given in the file. In the cases of doubtful ethnicity and sex, local school building personnel were contacted to provide this information if available.

A second psychological file search was conducted on the selected D and EMR students with procedures similar to those above. The data concerned retrospective information about the recommendations made by teachers, school psychologists and Admission and Discharge committees about the students at EMR and reassessment recommendation. Appendix C contains the coding system and form used for collecting these data. The reliability of coding is discussed later in this chapter.

Cumulative records. The cumulative file form was also based upon a sample of representative cumulative files. Data for only students selected for current study were recorded. The data were found in individual school buildings; if the file was missing, a second search was made and further follow-up was discontinued if the file was not located. The following variables were of interest: total enrollment of the school as well as its ethnic proportions; type of transition program for the decertified students; standardized achievement scores, attendance record (yearly and by semester), school marks (reading, math, social studies, practical arts, physical education) and the citizenship or discipline grade for each class; the program in which the student was enrolled for each semester; and the teacher comments as given in the record. Other variables on the third page of the form such as the frequency of suspensions, awards and so forth were eliminated because they occurred infrequently or because other diverse sources had to be consulted at low cost-efficiency. Appendix C presents the cumulative record form as well as the method for entering the data.

The recording method was straightforward. Data were merely transferred from the school form to the cumulative record form. However, it was found that school districts varied in their assignment of school marks. For example, some school districts recorded marks on a five point scale from "A" to "F" whereas others gave either a pass or fail evaluation, just to name a few. As a result, a system was devised which weighed the responses from the various systems and assigned values in reference to a five point scale. A complete description is given in Appendix C-18.

Metropolitan Achievement Test. Each teacher was presented copies of test booklets for all MAT levels (Primer, Primary I, Primary II, Elementary, Intermediate, Advanced) and was asked to choose the level most appropriate for the student. Students then were grouped according to levels, yielding groups from 1 to 6. The students were administered only the reading and math section in a room provided by an individual school building. The standard procedures given in the test manual were strictly followed except for extended rest periods given between individual subtests.

Each student was scheduled for a test on one or two test days, depending upon the requirements set by an individual school building principal. However, some students were absent for testing or missed subsequent sessions for particular subtests. In each of these cases, the school was contacted at least once but not more than five times for a pick-up test session with the absentee students. Otherwise, no further testing was conducted.

The procedure for assigning test level was experimental because it used teacher judgment rather than the student's chronological age related grade level as the basis for test level. The discrepancy between the out-of-level test level and actual grade placement was at times extremely wide. For example, senior high school students were given tests whose recommended grade level range was between grades 2.0 to 3.5. However, two studies were conducted which analyzed whether this method resulted in psychometrically satisfactory assessment for the sample of D, EMR and RC. The results which are reported in Appendix F (Yoshida, 1975; Yoshida, Meyers, & MacMillan, 1975) show that most subtests within a level: a) were highly reliable according to Kuder-Richardson reliability coefficients, and b) discriminated between high and low scores indicated by the moderate to high positive point-biserial correlation coefficients for most item-total test score relationships. In short, the teacher judgment method of out-of-level testing yielded a psychometrically acceptable way of assessing the reading and math achievement in this sample of students.

Teacher comments. Each teacher's periodic statements about a student's progress in school were recorded on the cumulative record from (see Appendix C). From those comments, a classification system was devised which categorized the information into 5 categories with varying degrees of positive and negative characteristics in each. Two coders judged the comments; inter-rater reliability is presented below. The complete coding system and form is presented in Appendix C.

Teacher questionnaire. A questionnaire was developed in order to ask each teacher of the selected students his assessment of: a) the student's achievement and school adjustment, b) the success of the transition program, c) the likelihood of currently enrolled EMRs having success in a regular program, and d) the impact of the student on regular classroom instructional program. Each teacher of a sampled student was identified. A teacher of a D and RC pair of students was always the same. The appropriate questionnaire (see Appendix C for particular forms) was sent to each teacher between April and June, 1974. A follow-up mailing was made in September and October, 1974. Each teacher was given a stipend of $3.00 upon completion of a questionnaire.

Reliability in Copying and Coding Data

The data presented here concern the question "what is the extent of agreement, conservatively estimated, of the coding of school records?"; several studies were conducted to obtain data bearing on this question. This section briefly describes the procedures used and the data obtained in these studies.

Procedure

The same general procedure was followed in assessing agreement between individual's codings for cumulative records, psychologist file data, and teacher comment data. This procedure involved the selection of school records, the coding of these records and the determination of agreement between codings. The records selected represented a random selection from those school districts keeping the most detailed and extensive records. Individuals involved in these studies independently coded the records using the standard procedures described in Appendix C. Agreement (A) for a particular record was defined as the ratio, expressed in percent, of the total number of items coded the same (S) to the total number of items coded differently (D) plus those coded S; in other words A = S/S + D. Items not coded by either coder were excluded from consideration. For each set of records coded a total A was obtained by summing S and D across all records and then calculating the ratio of ΣS/ΣS + D.

In determining A, two groups of two individuals each coded records drawn from two school districts. Estimates of A are reported below for cumulative record, psychologist file, and teacher comments.

Compared with the other two records, the coding of teacher comments (TC) relied more heavily on the coders' interpretation and judgment; therefore considerable effort went into developing a reliable set of coding categories. We began by selecting and slightly modifying categories developed by Mercer (1973) for the same purpose; then two individuals, those who were to code all the TC records, applied these categories to the TC data; the resultant total agreement, however, failed to meet our stated objective of at least 80% agreement. We found it necessary to go through cycles of category and procedure redefinition and testing before arriving at a useful set of categories and procedures (Appendix B) which met project objectives. These redefinitions consisted mainly of eliminating or collapsing categories and of having the coders respond to the total comment rather than to each of its constituent sentences or phrases.

Results

We present the results obtained in assessing the agreement (A) between individuals coding cumulative record, psychologist file, and teacher comment (TC) data. For each type of record tables are presented which list the value of A % and a total A %; the latter represents a weighted average reflecting the total number of items across records coded the same or different.

Cumulative record data. Table 4.10 presents the results of the assessment of A for two groups of two coders with each group coding a particular school district's records.

TABLE 4.10

Percent Agreement between Pairs of Coders in Coding Cumulative Records

RECORD SAMPLES

	1	2	3	4	5	6	7	8	9	10	Total
Group 1	84.9	89.9	99.0	82.6	85.4	94.4	92.0	83.0	84.8	90.0	89.1
Group 2	82.4	95.1	70.5	91.1	89.3	92.1	89.9	--	--	--	82.2

Total A and A for all but one of the individual records exceeded the objective of 80% agreement.

Psychologist file data. Table 4.11 lists the percent agreement reached by two individuals independently coding psychologist file data.

Table 4.11

Percent Agreement between a Pair of Coder in Coding
Psychologist File Data

RECORD SAMPLES

1	2	3	4	5	6	7	8	9	Total
81.3	75.0	83.3	75.0	81.3	78.6	92.9	83.3	87.5	81.2

The total A (81.2%) slightly exceeded the objective of 80%; it is worth noting that the values of A less than 80% for individual records maximally differ by only 5%.

Teacher comments (TC). Agreement in coding these data was assessed at two intervals with the first (I) occurring when coding began and the second (II) approximately midway through the coding of all the TC data. Table 4.12 contains the results of the assessment.

Table 4.12

Agreement in Coding Teacher Comments Data at Intervals I and II

RECORD SAMPLES

	1	2	3	4	5	6	7	8	9	Total
Interval I	84.6	100.0	73.3	76.9	73.9	61.5	75.0	80.9	92.8	80.4
Interval II	80.0	86.5	66.7	85.2	83.8	83.3	--	--	--	81.6

For both I and II Total A slightly exceeds the objective of 80% agreement; however, a number of A values for specific records fall below this value (i.e., 5 out of 9 for I and 1 out of 6 for II). Variability of individuals' A values decreased from an SD = 10.77 for I to an SD = 6.66 for II. This decrease in variability, however, failed to be statistically significant.

Summary and Discussion

In general the level of overall agreement in coding cumulative records, psychologist files, and teacher comments (Total A) exceeded our objective of 80%. Greater variability existed in the coding of TC than the other records, probably reflecting the greater degree of interpretation and judgment required in coding teacher comments as opposed to the coding of cumulative record and psychological file data. These obtained values of A represent a conservative estimate of coder agreement in that all items which either coder agreed not to code were excluded from the assessment of A. Based on these data the procedures for coding school records met our objective of 80% or better and appear to produce a satisfactory level of agreement when used by different individuals.

Further Methodological Notes

There were some further methodological problems which concerned the validity and consistency of the data. The problems fell into two areas; one involved the valid identification of the experimental units (i.e., decertified (D), EMR (E) and regular class (RC) students) and the second the consistency and validity of the school record data on the individual student. The first problem posed questions concerning the integrity of the experimental design and the second posed questions concerning the validity of the values of the independent and dependent variables associated with the experimental units. The following discussion of these problems assumes that the necessary school documents were available and accessible and that further the field personnel accurately recorded the data.

Using the lists made available by the school districts; central office personnel randomly selected decertified (D) students and obtained their EMR matches (E) following procedures described earlier in this chapter; these two students plus D's regular class match (RC) form the triad or the basic unit for statistical comparisons. Matching was based on program level, ethnicity, sex and age.

With these samples identified, project and/or school personnel began the collection of additional information (e.g., cumulative record) from the schools. A comparison of the information obtained from the district office and the schools revealed discrepancies not only in the values of the matching variables but more seriously in the identification of student status (i.e., D, E, RC).

To maintain the integrity of the experimental design these discrepancies in identification of student status, such as a student listed both as D and RC, and in matching, such as a student listed in both elementary and junior high school, had to be resolved or the student involved plus his two cohorts dropped from the study; considering the cost and time invested in obtaining a triad, an intensive effort was made to resolve these discrepancies. It should be noted parenthetically that discrepancies of the type described occurred at the school level; specifically, conflicts in recorded data existed within a school's records as well as between these records and the information supplied by the school's personnel.

To resolve these problems we sought out and obtained additional school and district records and assistance from school personnel. In some instances this additional information made possible a quick resolution but in others the various "pieces of evidence" had to be compared in terms of consistency, then weighted and judged. In many of the latter instances a resolution of student status or values of matching variables was arrived at, but in the remainder the press of time and the burden of additional cost played a deciding role in the removal of the individual from the study.

The resolution of these problems concerning student status or matching enhanced the validity of the experimental design but at the same time entailed an unanticipated expenditure of time and funds. Specifically, we thought that the information supplied by the school district's central office plus its verification by psychologists' data sufficient for adequate identification of the experimental units and their matching characteristics, but this expectation proved to be only partially true.

Validity problems also arose in establishing the value of the independent and dependent variables involved in this study. Some of these problems we discovered, as in the above, by comparing different sources of information (e.g., district vs. school records) when establishing the value of a variable and finding conflicting values. We discovered another set of validity problems by comparing records from different districts and noting the differences not just in completeness but also in the type and form of expression of the information. These differences were found traceable to differences in school district policy on what and how to record information; in some instances these policy differences existed between schools within a district and between teachers within a school. The validity problems posed by conflicting sources of information were largely resolvable but the bias introduced by differences in district policies frequently was not.

An example of how these policy differences affected not just the completeness but the accuracy of the information can be seen by examining the teacher's comments contained in the cumulative records. These records in some districts contain extensive comments describing, both negatively and positively, aspects and accomplishments of the students; these comments frequently described concretely the student's actions. We found in other districts only positive expression and then only in the form of generalities. A comparison of cumulative record information between districts appears precluded because systematic differences were found but traceable probably to differences in district policies on what and how to record information rather than differences in school programs.

The problems in establishing the type of transitional program in which the D student was placed illustrates the validity problem posed by conflicting information. In a number of instances the school district office supplied information at variance with that supplied by the school unit; in some instances discrepancies arose between what the school reported and what the teachers indicated in the teacher questionnaire. Problems of this sort like those found in establishing the student's status generally require additional time and funds to resolve.

In undertaking this project we anticipated some of the problems we encountered; however, as can be inferred, others we did not. The problems referred to here concern the valid identification of the experimental units, the validity of the sampling plans and the validity of measurements of dependent and independent variables. We spent considerably more time than anticipated in resolving these problems and although the investigation was sounder as a result, this soundness was bought at a considerable cost in funds, time and anxiety. Based on our experience we would some day like to prepare a reasonably exhaustive report listing the problems and their resolution to serve as a guide for those considering research of this nature.

CHAPTER V

Results: Followback on the Decertified

The next chapter (VI) contains the results from the study of the current status of the decertified in contrast with the non-decertified and the regular class match cases. The present chapter presents results of the project which provide a pre-decertification review of the D and the non-decertified EMR, together with other material of interest. Much of the material is in the form of contrasts between the D and EMR groups before decertification Before these contrasts we present some state-wide information on the distribution by ethnicity of the EMR enrollments in California together with some similar information about some of the districts in the project.

EMR Enrollment, Decertification, and Placement

The first portion of this chapter reviews not only our own information about the D and EMR students in the project districts, but also some state-wide data as well, presented here for perspective.

Distribution of EMR by ethnicity. Table 5.1 presents information about the proportion in California of students of the principal ethnic categories, for all students and for EMR. The 1969 information was basic to a federal court order requiring among other matters the reduction of the ethnic imbalance in EMR and other special class enrollments. The disproportions by ethnic designation are clearly evident. After mandated reassessment (with lowered IQ guidelines, use of translated tests and nonverbal tests) the ethnic disproportion did not greatly reduce, as the information for 1973 displays. The court in the continually litigated Larry P. case then set firm boundaries for the proportion of EMR and other students in special class, regardless of eligibility. This has currently (1975) resulted in the presence of identified and eligible students for EMR who may not be placed till there is room in the ethnic "quota." Returning to information specifically pertinent to the project, the data of Table 5.1 can be seen in relation to the data of Table 4.1 in the previous chapter in which the ethnic imbalance of EMR enrollment for the year 1972-73 is observed for some of our project districts. Some districts would not necessarily show the disproportion relative to the total ethnic proportions of the district enrollment inasmuch as some have so few of one group or another as to provide no basis for contrast. Attention is called however to districts 2, 4, 7, 9, and 10 in Table 4.1 All have substantial proportions of the three main ethnic groups. The overrepresentation of Spanish-surnamed and Black students is evident in all except one of those five. The 1972-73 data are for a school year which followed the application of the new guidelines for two or three years; before 1970 the imbalances would have been even more apparent.

Table 5.1

Statewide Enrollments, October, 1969 and June, 1973

	Anglo %	Black %	Span. Sur. %	Total
1. Total California public school pupils (1969)	72.4	8.9	15.2	
2. Percent of own ethnic group in EMR (1969)	0.7	3.3	2.1	
3. Percent which ethnic group is in total EMR (1969)	43.1	27.1	28.2	55,519
4. Percent which ethnic group is in total EMR (1973)	50.0	25.0	23.0	35,110

Source: Simmons, Allan, and Bringegar, Leslie. Ethnic survey of EMR classes, 1973. Sacramento, California: California State Department of Education, 1973.

Table 5.2 provides information for Los Angeles County total and the whole state about the process of reassessment as reported to the state legislature for the year 1969-70. Approximately 12% of EMR students had already been reassigned during that first year; the proportions grew to reach the values indicated in Chapter IV, indicating about 45% eventually were decertified. It is observed in Table 5.2 for both Los Angeles County and the state total that the number of reassessments even in 1969-70 were about 87% of all EMR enrollees.

Table 5.3 provides some further information of interest taken from the same report to the legislature. It shows the reduction of total enrollment, the slight adjustment of the ethnic proportion achieved in the first year of mandated change, and the proportions of students who were re-evaluated.

Table 5.4 shows the progressive drop in EMR enrollement since 1968 through the 1973-74 school year. The drop in EMR enrollment was due of course only in part to the decertification. Our subjects in the project districts were exclusively the EMR enrollees in the period 1969-72. Besides the decertification consequent to mandated reassessment were drops in EMR enrollment due to the new guidelines which affect new admissions, greater reluctance to refer for potential EMR placement, and the progressive drop in enrollment. In addition, some drop, nobody knows how much, was consequent to the termination of EMR classes when decertification cut enrollments to a point where it was not feasible to continue.

Table 5.5 displays data for the project districts, showing that the heavy years of decertification were 1969-1972 in most instances. Two districts are observed to have decertified in substantial numbers only late in the period.

Placements into which decertified students were put. Table 5.6 has the information. The data were determined for the individual student. It was not always possible to ascertain whether the placement endured or to verify the information. Individual cases are known to have gone back to EMR or to shift around otherwise quite a bit. Budget considerations precluded detailing the moves. The preponderant placement was to regular class. In a poor second are "EH," special classes for the educationally handicapped, some of which are partially integrated, designed for the learning disabled and/or the emotionally disturbed. The separate line for social adjustment is for classes thus named, fully or partially integrated, into which are placed those whose primary problem is disruptive behavior. Technically such classes may or may not have qualified for extra state support under the EH provision. Remaining categories are inconsequential as to number. It is observed that some districts placed their decertified into so-called "transition" groups, consisting only of the decertified, as a quick first step to providing a reassignment.

Kinds of transition assistance reported. The data are found in Table 5.6 also. Although school or district policy may have predetermined a particular model for the transition assistance (or for none at all--it was not strictly mandatory under the law though the federal court appeared to

Table 5.2

Data on Reassessment and Reassignment for Los Angeles County[a] and State-Wide EMR Students During the Year 1969-70

	Los Angeles	State
Enrollment (October, 1969)	21,788	55,519
Number reevaluated	19,037	48,080
Number of reevaluated pupils transferred to regular classes	2,378	5,651
Percent of number of reevaluated pupils transferred to regular classes	12.49	11.75
Number of reevaluated pupils transferred to other special education classes	323	1,195
Total number of reevaluated pupils transferred	2,701	6,846
Percent of total number of enrolled pupils transferred	12.40	12.33

[a] Includes Los Angeles City District

Source: California State Department of Education. *Placement of pupils in classes for the mentally retarded: A report to the California Legislature as required by House Resolution 262.* Sacramento: author, 1971.

Table 5.3

Data for State Total on Enrollment
Change by Ethnicity and Proportion Reassessed, 1969-70

Ethnic group	Enrollment (October, 1969)	Percent of Total EMR Enrollment	Enrollment (August, 1970)	Percent of Total EMR Enrollment	Percent Reevaluated
Spanish-surname	15,657	28.2	12,276	25.8	94.8
Other white	23,947	43.1	22,125	46.5	82.9
Black	15,022	27.1	12,253	25.7	84.1
Oriental	326	.6	359	.8	85.9
American Indian	244	.4	261	.6	93.4
Other nonwhite	323	.6	331	.7	75.2
Total	55,519		47,605		86.6

Source: California State Department of Education. Placement of pupils in classes for the mentally retarded: A report to the California Legislature as required by House Resolution 262. Sacramento: author, 1971.

Table 5.4

Change in EMR Enrollment, 1968-73,
in Los Angeles County and State Total

Year	Los Angeles County	State Total
1968-69	22,745	57,148
1969-70	21,594	54,078
1970-71	19,278	47,864
1971-72	14,139	38,208
1972-73	11,741	33,091
1973-74	10,244	29,609
Difference	-12,501	-27,539

Source: California State Department of Education. Enrollment of Educable Mentally Retarded Pupils: School years 1968-69 to 1973-74. Sacramento: author, 1974.

Table 5.5

Frequency Distribution for the Year of Decertification o EMR Students in Project Districts, in Percents

School Year	DISTRICTS											
	2	3	4	5	6	7	8	9	10	11	12	13
Decertified N	678[a]	424	134	52[b]	70	36	30	41	20	76	146	4
1969-1970 Percent	26.5	25.5	48.5	0.0	14.3	19.4	23.3	0.0	15.0	56.6	29.5	0.0
1970-1971 Percent	56.5	40.1	34.3	5.8	25.7	25.0	40.0	4.9	50.0	14.5	37.7	100.0
1971-1972 Percent	11.5	16.3	9.7	50.0	40.0	19.4	20.0	0.0	20.0	7.9	19.2	0.0
1972-1973 Percent	4.0	10.4	6.7	44.2	17.1	27.8	10.0	95.1	15.0	19.7	10.3	0.0

[a] Data on transition students only

[b] Data on sample of currently enrolled decertified students

Table 5.6

First Placements of Decertified EMR Students and Kinds of Transition Help Reported. by Percent of Students in Project Districts

	DISTRICTS											
	2	3	4	5	6	7	8	9	10	11	12	13
Placement (Percent of Students)												
Regular Class	94.4	88.9	87.3	96.2	84.3	58.3	70.0	0.0	95.0	73.7	60.3	50.0
EH Class	0.9	3.3	11.9	1.9	8.6	30.6	13.3	4.9	5.0	11.8	34.9	50.0
Social Adjustment	0.3	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Special	0.3	1.2	0.0	0.0	4.3	5.6	13.3	95.1	0.0	13.2	2.7	0.0
Unknown	1.0	1.2	0.7	--	2.9	--	--	--	--	--	--	--
Kind of Transition Help Reported (Percent of Students)												
Resource teacher, works with student	13.0	2.0	--	75.0	100.0	--	--	--	100.0	--	--	--
Resource teacher as teacher consultant	-	6.0	26.0	--	--	--	--	--	--	--	--	--
Self-contained transition class	60.0	11.0	24.0	--	--	--	100.0	--	--	--	--	100.0
Instructional aides	20.0	79.0	38.0	--	--	--	--	--	--	100.0	--	--
Volunteers	--	--	--	--	--	--	--	--	--	--	--	--
No help provided	27.0	2.0	--	12.5	--	100.0	--	--	--	--	40.0	--
Unknown or no record	--	--	6.0	12.5	--	--	--	--	--	--	60.0	--

have mandated it) the model employed could vary by building and even by grade. The data are not held forth here as good data from which much can be learned. District personnel pointed to the experimental variations in what they provided. They also pointed out that when through a technical flaw in the language of the law the program lost funding for awhile, many districts simply did not renew their programs at the time when the money was renewed. Hence a report that a D student enjoyed placement in regular class with a resource teacher and an aide, such may have been true for, say, only a year of the time between his decertification and our study. We also regret to indicate (anticipating a point in Chapter VIII) that the transition help was sometimes so invisible as not to be known to the regular class teacher of the D student.

It had been hoped in the development of this project that we could secure information of a sort to serve as a guide to the development of mainstreaming. We had even hoped to compare success scores by model, at least to point out that certain models were found to fit better with elementary level, others with inner city, etc. The nature of our data on models precludes any attempt at making conclusions which could be very usable to others. We do however make one commentary here on the data of Table 5.6, and in the final chapter we do make a note on the implications. The models appear to have a natural dichotomy in which one variety employs professionals who are teacher consultants or resource teachers, etc., and in which the other employs paraprofessional such as paid aides or volunteers. Of course the models often employed both; for example one district utilized an experienced counselor as ombudsman and teacher-consultant, one task being to help the regular teachers use the aids to their best advantage.

The largest districts (#3 and 4, for example) used a greater variety of models. (District 2 with only a few subjects in this study is nevertheless a very large district, and also shows the variety found in #3 and 4.) A few districts utilized only paraprofessionals.

Another hope which more or less vanished was to determine whether any model initiated with the transition funds provided by the state would have been carried on when the funding terminated, whether for these D students or for others with similar needs. We determined that most programs were dropped when funding terminated, except where the district received funding for trying out the new state master plan for special education. The interruption of funding had a disheartening effect and produced some cynicism, to judge by the conversations we held with district personnel.

On the other side of the coin, however, we identified some districts (like others not in our project) which had already taken serious steps to integrate the EMR and other segregated learners to some extent before mandatory reassessment ever came about. Such districts had the smallest proportions of segregated EMR and appeared to glide gracefully into transition programs, continuing them after the termination of funding. Such districts were few in number; their per pupil wealth had permitted them to develop and maintain such forerunners of what now has become the mainstreaming thrust.

Table 5.7 is based upon the State's form on which the district which requested reimbursement would supply information about the manner in which transition help was provided.

The age-grade placement of D and RC students. The typical California child enters kindergarten in September at an age between 4 years 9 months and 5 years 9 months, and advances one grade per year. In round numbers, one assumes his grade placement is age in years minus five. That is, if he is eleven, he is typically in sixth grade. This pattern permitted a determination of whether placement of our students was modal or, as we suspected, different for the D students and for the RC matches.

Table 5.8 displays some data for certain school districts where the information was secure enough to permit the drawing of interences. The information is arranged for total district and for elementary, junior high, and senior high levels. Scores of expected vs. actual placement were determined; thus a student who was 14 years old at the time of our study should by the modal case have been in the 9th grade. If he was, say, in the 8th, he would have had a deviation of -1.0. The mean deviations are listed together with tests of the hypothesis that the means were zero. As shown, every difference was significant. This finding helps to understand the success of the D students, indicating that their educational progress, as judged by the results of the MAT grade equivalent scores (in the next chapter) must be interpreted with awareness that they tend to have been placed about a grade and a half to two grades below expectancy.

Table 5.9 shows that the D students tended to be older than their RC matches with most of the groups of differences being significant. The differences run about a half a year. This information reinforces the point above about the interpretation of the success of the D student. The next chapter, in presenting contrasted achievement data, should be read with reference to this. However we also note that while the D students were about 1½ to 2 years below age-grade, the RC students are only about a half year younger; as a group the RCs also appear to be somewhat behind the modal placement, not too much a surprise considering the nature of the classes in which the Ds were placed and the intentionally biased selection of the RC match cases, as described in Chapter IV. This information is confirmed by teacher judgment, as shown in Chapter VIII.

Some Contrasts of D and EMR Students

This section of the chapter makes some contrasts of the two groups of students on pre-decertification data. There are some obvious questions asked with particular reference to whether anything can be learned about which students can be appropriately assigned to segregated vs. mainstreamed programs. Among the questions of contrast are these:

How many years of regular class enrollment before EMR placement?

How old when placed in EMR?

Table 5.7

TRANSITION PROGRAM TO BE OFFERED: (Please check below)

_______Transition Class located at a school where students are instructed by a certified teacher for a short time every day. (One class period or less.)

_______Individual tutoring (check the appropriate descriptions):

- _______daily
- _______at least 3 times a week
- _______given by employed paraprofessionals
- _______given by volunteer paraprofessionals
- _______given by students
- _______for 30 minutes minimum, but no more than 60 minutes at one time

_______Itinerant teacher:

- _______working with students in their classroom
- _______working with students out of their classroom at least 2-5 times weekly for periods of 30 to 40 minutes
- _______working with the students' regular teacher to assist with the instructional plans for the student

_______Tutorial sessions: either paraprofessionals or teachers meet students regularly to assist them with their classroom lessons

_______Bilingual instruction: individual instructional assistance is given to students in a language other than English

_______Resource Learning Center

Percent of school day that transition pupils will attend regular classes:

100% (no. of pupils) ______________
75% (no. of pupils) ______________
50% (no. of pupils) ______________
Other (explain) ________________
____

STAFFING PATTERN: List the number and check the type of personnel who will be assigned directly to the transition program and the amount of time:

				FTE
_______	Coordinator or Supervisor of Program	No. part time_______	No. full time_____	_____
_______	Certificated Teachers----------------	No. part time_______	No. full time_____	_____
_______	Teacher Aides------------------------	No. part time_______	No. full time_____	_____
_______	Tutors-------------------------------	No. part time_______	No. full time_____	_____
_______	Others (specify)---------------------	No. part time_______	No. full time_____	_____
			Total Full Time Equivalent	_____

Source: California State Department of Education. Application for Prior Approval to Operate a Transition Program for Minors Enrolled in Regular Classes Who Were Formerly Enrolled in Special Classes for Mentally Retarded. California Education Code, Section 18102.11 (SB 171), 1972.

Table 5.8

Difference Between the Decertified's (D) Actual Grade Placement and that Expected for Same Project Districts

Hypothesis Tested:
that the D's actual grade placement minus
the expected equals zero.

School District	Program Level	N	Mean Difference in Grade Placement	Significance Level
3	All	60	-1.86	**
	Elementary School	13	-2.15	**
	Junior High School	37	-1.89	**
	Senior High School	10	-1.40	**
4	All	33	-1.58	**
	Elementary School		a	
	Junior High School	12	-1.83	*
	Senior High School	19	-1.47	*
6	All	19	-1.22	**
	Elementary School	2	a	
	Junior High School	10	-1.3	**
	Senior High School	7	-1.00	*
12	All	38	-2.13	**
	Elementary School	6	-2.67	**
	Junior High School	19	-2.16	**
	Senior High School	13	-1.85	**

[a] Too few cases
*$p < .05$
**$p < .03$

Table 5.9

Difference in Age (years) Between Decertified (D) and Regular Class (RC) Match for Selected School Districts

	Hypothesis Tested: D Age - RC Age = 0			
School District	Program Level	N	Average Difference in Years	Significance Level
3	All	61	0.61	**
	Elementary School	14	0.93	**
	Junior High School	37	0.57	**
	Senior High School	10	0.30	
4	All	35	0.63	**
	Elementary School	2	0.50	*
	Junior High School	11	0.55	*
	Senior High School	22	0.68	**
6	All	24	0.08	NS
	Elementary School	3	-1.00	*
	Junior High School	11	0.0	NS
	Senior High School	10	0.10	NS
12	All	38	0.66	**
	Elementary School	3	0.33	*
	Junior High School	15	0.13	NS
	Senior High School	20	1.10	**

*$p < .05$
**$p < .03$

What were the IQs at EMR placement? At decertification time?

What were the teacher observations which led to referral for psychological study, with ensuring assignment to EMR?

What did records of achievement and class behavior reveal?

There are good reasons for those questions. It would be valuable to identify in the kindergarten-primary years those children who are best educated in the segregated EMR class or something like it and those who will enjoy such mental growth as to permit anticipation of regular class status. The IQ data of Table 4.4 do not show such differences in pre-EMR placement to be counted on for more than a small contribution. Although some of the differences are statistically significant between related pairs of mean IQ (e.g., between mean Binet IQ for decertified and mean Binet IQ for the non-decertified in District 2, for example), not all such differences are significant, and most of them are of small magnitude. More importantly, there is variation between districts, so that one would have a separate problem for each district in the state.

The above discussion is made with awareness that in longitudinal studies of child development, IQs are not constant; some of them tend to show an upward trend, some a downward, the trends being meaningfully related to factors of stimulation or its lack in the home (e.g., the Fels reports of Sontag, Backer, & Nelson, 1958). It is thus of theoretical and practical interest to look over our data for predictive indicators.

In the data which contrast the D and non-decertified EMR groups the numbers are sometimes very small in contrast with the numbers with which the start was made in many districts. The reasons given above apply here as well--the item of interest was simply not available, for one reason or another.

IQs at EMR and decertification times. The relevant tables are 4.4 and 4.5 in Chapter IV. The data indicate that district by district the mean IQs of the two groups, D and EMR, differed only slightly at initial EMR placement time, but differed more between districts. The mean decertification time IQs do of course show a greater difference, to be expected since the magnitude of IQ led to the differentiation of the groups. However the similarity of pattern across districts provides a correlation of D and EMR pairs of means by district, greater of course for the IQs at EMR identification.

Significance of the IQ information at EMR time. It had been expected that the students identified for decertification would have been those with higher initial IQs. The data of Table 4.4 make it quite clear that this expectancy, while "statistically significant" in the instances of many of the pairs of mean IQs in the table, nonetheless tend to disconfirm the expectancy. The mean differences are simply not large enough to permit one to say in general hindsight, schools should have used a lower cut-off. To put the results another way, there is a "legitimacy" to the initial EMR identification, given the acceptance of a couple points: (a) that there should be any EMR or other special identification at all; (b) that, accepting the new, lower IQ cut-offs, the older IQs were legitimate for their times. That is to say, if one grants the validity of the initial EMR identification for the non-decertified group, then one must grant it for a considerable proportion of those who later were decertified. The statement would not hold for certain districts, as the data of Table 4.4 shows--for example, the six-point difference in mean WISC for District 6.

In short, some children "grew," so-to-speak, and did so in spite of or even because of the EMR placement they received, while others did not. No statement made in this context, we stress, argues whether segregated EMR education is or is not good in its net effect, whether under labeled conditions or not. We simply indicate that the data do not show the expected large difference in the IQ that led to EMR placement between the D and EMR groups.

We stress at this juncture that the data should not be misread to indicate that the only reassessments were those imposed by law. We further note that one should not conclude a status change was due only and exclusively to IQ (or to the mere lowering of the cut-off IQ by law). The records tend to show terse entries such as an IQ and a note about status change; not recorded would be the typical considerations of how well the classroom achievement adjustment had been, the EMR teacher's prediction of success, the consideration of whether the student would profit from the change, etc. Though not typically recorded, such considerations did usually enter, and district personnel were always ready to describe their processes. To a considerable extent the district's hands would be tied by law, but qualitative features were not ignored. The data on mean IQ at decertification (Table 4.5) interpreted in terms of SD of IQ for the D and EMR groups within each district, show an overlap which testifies to the point being made.

We next present further information pulled from the records, oftentimes available or only a few cases. Assuming that some slow learners are to be specially educated in totally or partially segregated models, while others are to be provided a fully normalized, unlabeled program, with only incidental help to stay in mainstream, then what in the early school years could indicate the future status? It was our hope to find some promise in the data. We screened cumulative records and psychological files for the purpose.

Years of school before EMR placement. Do the D and EMR groups differ in years of school before they were placed into EMR? Table 5.10 shows no discernible trend in the D and EMR means which permit us to conclude there is a systematic group difference. There is more difference between school district means; the pairs of D and EMR means vary with district. Districts 4, 5, and 6, for example, permitted longer regular class stay before EMR placement for both groups. Districts 2, 3, and 11 are notable for short enrollment in regular class. If one had proposed the hypothesis that D subjects, being allegedly more nearly normal learners, should have had longer regular class tenure than the non-decertified EMR, he would find the hypothesis disconfirmed by our data.

Table 5.10

Duration in Years of Enrollment in Regular Class Before EMR Placement, and Duration of Years in EMR before Decertification Assessment

	DISTRICTS											
	2	3	4	5	6	7	8	9	10	11	12	13
Duration in regular class placement before EMR (years)												
D Group												
Mean	2.58	2.51	3.84	3.64	3.3[illegible]	3.28	4.38	--	4.42	1.97	3.38	--
SD	1.72	1.59	1.83	1.79	2.12	1.94	2.39	--	1.80	1.12	1.82	--
N	6	46	34	36	25	17	8	a	9	27	38	a
EMR Group												
Mean	2.39	2.18	4.61	3.97	4.10	3.19	3.32	--	3.63	2.25	4.44	3.58
SD	.93	1.54	2.38	2.03	2.50	2.38	1.51	--	1.90	1.53	2.71	2.40
N	14	47	35	36	27	18	7	a	9	26	32	6
Duration in EMR before decertification reassessment												
D Group												
Mean	3.50	3.33	2.94	4.06	3.50	2.59	4.12	--	2.75	4.00	2.43	--
SD	2.74	1.69	1.37	2.08	1.53	1.66	1.89	--	1.83	2.11	2.32	--
N	6	48	32	36	24	17	8	a	8	24	37	a
EMR Group												
Mean	--	3.64	--	2.00	6.00	4.00	--	--	--	2.19	3.00	--
SD	--	.79	--	0.00	0.00	0.00	--	--	--	.79	0.00	--
N	a	22	a	28	9	18	a	a	27	27	8	a

[a] Insufficient data to report

Age of EMR placement. Was one group older than the other? The data are shown in Table 5.11. Such data should relate inversely to data on duration in regular class, and it is evident that they do. Districts 2, 3, and 11, with the shortest tenures in regular class, have the youngest mean ages of assignment to EMR, in contrast with Districts 4, 5, etc.

We may determine two further values from the information thus far presented. EMR placements tend to be made in the third or fourth year of school. However these "years of school" should not be translated into "second or third grade." The modal career of the student who became EMR was to experience first grade twice (perhaps kindergarten twice), and then be placed into EMR. The modal pattern does not fit all the careers; exceptions include withholding the child from school a year, or trying him one more year or so before placement. It is also observed that while some districts have programs for EMR before age eight, most do not, on the philosophy that every child deserves his chance but also for budget reasons. Another basis for interpretation is that our data on age of placement were secured by subtracting year of birth from calendar date of EMR placement. The decision to place would have to have been made before actual placement, perhaps as much as a year before, for removal and reassignment is usually accomplished only at the change of a term or grade.

The standard deviations associated with the mean ages are not large, so that the means with their standard deviations may be interpreted to mean that nearly all EMR placements were effected before age 11. Noting again that decision to place comes before placement, we can add that most decisions were reached before age 10 or 11.

Years in EMR before decertification reassessment. In Table 5.10 are also the data on years of enrollment in EMR before the mandated reassessment was made which could have led to decertification. The data are not the best. It was generally easy enough for the research assistants to identify in the records the point in time when decertification was effected. As indicated in Chapter IV, the policy was to eliminate cases in which the reassignment was apparently influenced by other steps than mandated reassessment. If there was no note to the contrary and if a reassessment was followed by actual decertification, the information was recorded. Districts had begun to practice annual or at least periodic reassessment long before mandated to do so. For the non-decertified EMR, the instruction was to record the information of the latest reassessment act in the period of mandated reassessment (1969-72).

Mention in the records of adjustment or achievement problems in connection with referral which led to EMR placement. Table 5:12 displays information secured from teacher referral notes (if they could be found in the files) when the teacher's observation of the student led to psychological study and eventual EMR placement. The table also displays mention if any in the psychologist's report. The former data are dependent in part on the extent of opportunity there was for a teacher to make special

Table 5.11

Mean Ages by District of D and EMR Groups
When First Placed in EMR

	DISTRICTS					
	2	3	4	5	6	13
Age in Years						
D Group						
Mean	7.83	7.46	9.09	8.89	8.56	--
SD	1.72	1.59	1.83	--	--	--
N	6	46	34	--	--	a
EMR Group						
Mean	7.64	7.43	9.86	--	--	8.33
SD	.93	1.54	2.38	--	--	2.40
N	14	47	35	a	a	6

[a] Insufficient data to report

Table 5.12

Percent of Decertified and Non-Decertified Students in Which Teacher Referral and Psychologist File Mentioned Personal-Social Problem and Achievement Problem

	DISTRICTS							
	2	3	4	5	6	8	11	12
Personal-Social Problem								
Teacher Referral								
D Group								
N	15	62	35	40	25	8	28	38
Percent	47	37	17	22	32	25	29	42
EMR Group								
N	15	66	35	40	25	8	28	38
Percent	33	26	20	22	32	12	46	26
Psychologist File								
D Group								
Percent	33	21	26	25	24	12	18	45
EMR Group								
Percent	20	14	31	20	28	12	32	18
Achievement Problem								
Teacher Referral								
D Group								
Percent	0[a]	89	66	58	52	75	79	84
EMR Group								
Percent	93	73	63	35	84	62	75	66
Psychologist File								
D Group								
Percent	80	73	11	60	48	75	71	87
EMR Group								
Percent	60	62	11	35	84	75	54	66

[a] Probably an artifact or error

Note.--Numbers of cases are totals for which mention was made and where it could have been entered but was not. Thus the percent given is a percent of the N given. The Ns are the same for all four comparisons.

notes when initiating a referral. The actual communication could have been an unrecorded word-of-mouth from teacher to psychologist or teacher to principal to psychologist. Furthermore the psychologist files would not necessarily note that the teacher referral mentioned something.

What we have, then, is a comparative estimate within the districts of the extent of mentions on either kind of record, not kept for purposes of later retrieval, but minimally maintained according to local requirements if any and/or according to the individual natures of those who created and maintained the records. Inasmuch as the records could have had no bias between those later destined to become the D group they should, within the individual district, have had the same degree of casualness or compulsiveness between the groups.

Mention of personal-social adjustment. The first part of Table 5.12 pertains to mention of adjustment problems, first by teacher and second in the psychologist file. A myth in EMR identification holds that the higher level EMR children were referred as much for behavior problems as for poor achievement. There are different versions or emphases of this legend. One is that the teacher wants minimal disruption to his or her control and wants to safeguard the morale and achievement of the other class members, so will utilize the presence of the EMR placement to initiate a way to remove the disruption. A less libelous version is that the teacher believes sincerely that certain children cannot be helped in this regular class and that a very poor achiever, or a moderately poor achiever whose problems are complicated with acting out behavior is better helped elsewhere. The most severly libelous version is that a teacher does not note truly poor achievement, but only disruptive behavior. Mercer (1970) has already shown that teachers are indeed aware of poorly learning children who if referred would be found eligible for EMR placement. Those whom they do refer are the ones for whom they conclude they cannot assist. Thus if the learning problem is compounded by frequent absence, parental noncooperation, or disruptive behavior, the child is more likely to be referred.

Our data in a sense sustain Mercer by not substantiating the libelous aspect of the myth. Mentions of behavior problems are not systematically greater for the D group considering all 8 districts listed in Table 8. Furthermore, the mention of academic problems was made far more frequently than behavior problems, again without systematic difference between the two groups.

Achievement reported by the teacher before EMR placement and following that placement. The question asked here was whether there was a difference in the teachers' appraisals of reading and math achievement in regular class for the last report period before placement in EMR to provide a clue to who would later be decertified. The companion question was the same for the last reporting period before decertification reassessment. The information is found in Table 5.13 for the former and Table 5.14 for the latter. In both tables the data are in the form of means for the groups involved where the mark was arbitrarily coded into a "1 to 5" scheme. The code is provided in Appendix B. The score of "1" would be used for F or for Unsatisfactory when four or five levels were employed, but a U in a 3-level or 2-level

Table 5.13

Comparative Mean Reading, Mathematics, and General Citizenship Marks for the Decertified and Non-Decertified EMR Groups in Last Reporting Period in Regular Class Before EMR Placement, by Districts

	DISTRICTS						
	2	3	4	5	6	7	12
Reading Marks							
D Group							
Mean	2.31	1.95	2.38	2.46	2.47	2.23	1.74
SD	.48	.77	.71	.79	.52	.73	.73
N	13	38	24	28	15	13	19
EMR Group							
Mean	1.83	2.08	2.47	3.09	3.17	2.20	2.27
SD	.72	.62	.80	.87	.41	.41	.80
N	12	34	17	22	6	15	15
Math Marks							
D Group							
Mean	2.54	2.16	2.20	2.34	2.27	2.00	1.63
SD	.52	.89	.71	.81	.46	.58	.68
N	13	38	25	29	15	13	19
EMR Group							
Mean	1.86	2.06	2.38	2.83	2.67	2.07	2.36
SD	1.10	.54	.72	.38	.52	.46	.93
N	14	35	16	18	6	15	14
General Citizenship Marks							
D Group							
Mean	3.08	2.83	2.83	2.96	2.90	3.15	3.00
SD	1.04	.54	.56	.62	.32	.55	0.00
N	13	29	24	24	10	13	1
EMR Group							
Mean	3.07	2.87	1.73	3.00	3.00	3.00	3.50
SD	.92	.76	.47	.73	0.00	.58	.58
N	14	31	11	16	4	13	4

Note.--Insufficient data to report in some districts.

Table 5.14

Comparative Mean Reading, Mathematics, and General Citizenship Marks for the Decertified and Non-Decertified EMR Groups in the Last Reporting Period in EMR Placement Before Decertification, by District

	DISTRICTS							
	2	3	4	5	6	7	11	12
Reading Marks								
D Group								
Mean	3.55	3.24	3.21	3.43	2.90	3.25	2.60	2.67
SD	1.04	.66	.79	.88	.57	.45	.63	.52
N	11	50	28	28	10	12	15	6
EMR Group								
Mean	3.21	3.26	3.18	2.93	3.10	2.83	2.58	3.36
SD	.70	.76	.88	1.05	.57	.58	.58	1.12
N	14	54	17	28	10	12	24	11
Math Marks								
D Group								
Mean	3.13	3.33	3.14	3.65	3.12	2.92	2.60	2.00
SD	.90	.66	.80	1.09	.83	.51	.74	.63
N	13	49	28	26	8	12	15	6
EMR Group								
Mean	3.07	3.23	3.18	3.30	3.00	2.75	2.29	3.45
SD	.62	.81	1.01	1.15	.50	.87	.47	1.21
N	14	56	17	23	9	12	17	11
General Citizenship Marks								
D Group								
Mean	3.08	3.27	3.35	3.33	--	3.18	3.00	--
SD	.67	.74	.78	.71	--	.60	0.00	--
N	12	30	23	9	--	11	7	--
EMR Group								
Mean	4.00	2.70	3.75	3.67	--	2.57	3.14	--
SD	1.41	.48	.96	1.53	--	.79	.38	--
N	2	10	4	3	--	7	7	--

Note.--Insufficient data to report in some districts.

marking format would provide for a score of 2 (the 2-level is illustrated in the system of marking a child only by Unsatisfactory vs. Satisfactory). A "Satisfactory" in the 2-level format would yield a 3 in coding. Thus, the system, while uniform within a district, would vary between districts providing a different meaning for a different coded score. For our purposes, the within-district comparison was under good control.

As may be observed in Tables 5.13 and 5.14, there was no systematic difference favoring either of the two groups in either the regular class reading or math achievement mark or in the marks given in the EMR enrollment. Some of the differences are indeed significant, but there is no pattern capable of yielding a general prediction.

General citizenship marks for last regular class marking period and last EMR marking period before decertification. We had already observed (Table 5.13) that mention of behavior problem before EMR placement did not differentiate the two groups. Our research assistants coded from the cumulative records the general citizenship marks given by teachers for the last marking periods before EMR placement and in EMR enrollment before decertification. For convenience, the information has also been placed in the Tables 5.13 and 5.14, along with reading and math information. Again one fails to note a systematic difference favoring one group or the other, with almost no differences being significant.

Taken altogether, the records as summarized in the tables have not assisted in forecasting the later D or EMR status. Like other data thus far presented, one does not discern much that would provide an earlier discrimination between groups; one tends to conclude that at first EMR identification the groups were not much different.

SES of D and EMR students. School district regulations prohibited the ascertainment of information about the home and family of project students. We were however able to obtain some information which was incidental to the need to secure parental permission to study the students in question. In the district in question, having a largely Black population but with a wide range of socioeconomic status, the only way parents' permission could be secured was to employ a district counselor to call upon the home. While he did so he secured some information about parental perception of the student's current contentment with his progress in school, whether (if a D student) he was happier and better off or not, and (for both EMR and D) whether he needed or had needed the special class and similar opinion. The information was reported to the convention of the Council on Exceptional Children in 1974; a brief copy of the presentation appears in Appendix F.

Together with securing the information, the counselor made a judgment of the total value of the home on material and educational goodness, giving a simple rating of 1 through 5, 1 standing for very good and 5 for poor environment. The 45 cases involved were of the three groups, D, EMR, and RC the latter two matched to the D individuals by sex, age, program level, and ethnicity (all Black). The data, shown in Table 5.15, indicate a gross difference in general quality of environment as judged by the single counselor

Table 5.15

Home Quality Ratings of 15 Homes Each of Matched D, EMR, and RC Students

Quality	D	EMR	RC
1 (high)	4	2	3
2	1	0	5
3	7	3	5
4	3	7	1
5 (low)	0	3	1
Group Mean	2.60	4.93	2.47

The EMR home was judged much poorer in quality than the other two. The finding is consonant with what has been casually observed about homes of EMR vs. other regular class or special class groups, but is also consistent with a theory that mental growth represented in IQ change is somewhat a function of the stimulating quality of the home environment, as demonstrated in the Fels reports (e.g.. Sontag et al., 1958). We do not propose adding the SES variable to any prediction equation, first because the finding is strictly tentative, but principally because of the philosophical implications involved in the employment of a gross category to identify cases at risk.

Discriminant function analyses of prediction of D and EMR status. With the presence of two categories of students, D and EMR, it is appropriate to employ the discriminant function model to determine what combinations of variables might serve as efficient predictors for later status. Only Districts 3 and 4 had sufficient initial cases to attempt to run such problems (IQ and other variabilities between districts precluded collapsing for more cases). Even so, the problem of missing data beset the best efforts. District 3, for example, only 54 had complete data for one set of data deemed worthy to put into the problems; in #4, only 36 cases had complete data. To determine what the effect would be, if we entered the IQ at the time of decertification into some discriminant function problems. As expected, that IQ dominated the predictive variance; that IQ was of course the principal basis for discriminating those to be decertified. Without using such an IQ, the variables which contributed to a modest prediction were IQ at EMR identification (but this did not necessarily take first place); sex (more boys proportionally were decertified); and reading achievement reported for the student before EMR placement.

The considerable variation by district in mean IQ for combined D and EMR groups, together with differences in proportions decertified (see Table 5.16) adds "noise" to a discriminant function analysis or any similar attempt to predict for the state as a whole or for the total of our project districts. As it is, even within a district, the discriminant function could correctly place only about 65% of the D cases and about 55% of the EMR cases, not a high enough score to be persuasive that we have been able to contribute much to a prediction.

The relative availability of D and EMR students for current study: An implication about the effects of decertification. Rumor suggested that baleful effects happened to the decertified when they found that they could not cope with the demands of regular class. One answer to the reality of this pessimism might be provided by the comparative presence in the district of the EMR and D students for our study of current status. Did they drop from school earlier than the EMR? Table 4.6 has already presented the information on this availability in our 12 project districts. With few exceptions we found the proportions of available D students to be higher. "Unavailable" is not a definition of dropping out but it is probably correlated with dropping out--clearly an available student has not dropped out. The fear of early dropping out of the decertified, then, is not substantiated in what data we can present; to the contrary, if there is validity at all to the notion, then the EMR were more exit-prone.

On a purely speculative level, if the percentages of levels of home quality presented above, found for small data for one of our districts, were found for all (provided we could be permitted to look) we would eventuate with a conclusion that the availability-unavailability of a student might have been a function of family mobility, in turn a function of general home status.

Decertification by race and sex. Data in Table 4.3 showed who constituted the decertified and the non-decertified students by ethnicity and sex in our project districts. Table 5.16 recasts the data to show the proportions of each ethnic group and each sex who were decertified. The data are presented only for those five districts which had sufficient numbers of the three ethnic groups to permit a meaningful contrast. Except for district 7 the proportions of the Spanish-surnamed students showed the largest proportion decertified, the Anglos the least. The finding is consistent with what has otherwise been shown in non-project districts. One entertains the thought that ethnicity could be entered into an equation to predict decertification; it is possible to add "minority status" vs "Anglo" with numerical values into the discriminant function problems mentioned above, and such would indeed add to the prediction of later status; however the ethnic proportions are so much a function of district that a general statement could not be made.

For convenience the decertified proportions of each sex are entered into Table 5.16 only for the same five districts; had data for other districts been added the conclusion would not have changed. Males are consistently more likely to be decertified than females. However as with ethnicity, one would have to do the comparison for each district, for districts differed greatly in the total decertified for the combined sexes (compare districts 3 and 10, for example).

Table 5.16

Percentages of Ethnic and Sex Groups Decertified in Certain Districts

District	N	Anglo	Black	Spanish-surname	Males	Females
3	822	41	52	59	52	50
4	470	29	40	63	45	40
7	148	14	35	12	26	22
10	118	24	11	17	16	14
12	275	26	27	50	71	43

CHAPTER VI

Academic Achievement

In this chapter data are presented which assess the present or current functioning of D children, with specific focus on their academic achievement. In order to clarify the degree of success achieved by the D children, comparisons are made to the EMR and RC samples where such comparisons are meaningful. Two major sources provided the data of interest: the Metropolitan Achievement Test (MAT) and teacher marks. Teacher marks reported include those for reading achievement, math achievement, reading citizenship. Hence, the outcome measures used to evaluate the current functioning of the various samples are:

1) MAT - reading

2) MAT - math

3) Teacher marks in reading

4) Teacher marks in math

5) Reading citizenship

6) Math citizenship

7) Attendance

Additional information on the success of students is found with other material and is presented in Chapter VIII. This information was secured by means of questionnaires completed by the teachers of the project students sampled for current status study. The two subject matter areas which are legendary and which are comparable from elementary to junior high to senior high are reading and mathematics. They were selected as the principal outcome measures for purposes of this project. In addition to the academic mastery of reading and math, we were interested to obtain any information available on the deportment of these children. Some have argued that one of the prime reasons the ethnic minority child ended up in an EMR class was his deportment. We were interested to ascertain whether the D children evidenced any more behavioral problems than our RC subjects. In order to get at that factor, citizenship grades were selected (in addition to information gathered on the teacher questionnaire) as one index of deportment.

Finally, information on school attendance was collected in order to gain an unobtrusive measure of the extent to which a child avoided school, presumably because he found it aversive. It was felt that if samples differed in attendance, it would indicate differential attitudes towards school. Specifically, the EMR and D samples were of interest, since one of the stated advantages of the special class is that it protects the child from undue failure. If D children were found to have reliably lower attendance rates, one might question the success of the transition programs in preventing failure in the school context.

Data Analyses[1]

Two major types of analyses were performed on the outcomes specified earlier in this chapter. The MAT data were subjected to analyses of covariance (ANCOVA) using either program level (e.g., 5th grade, 6th grade) as covariates. The grade equivalents (GEs) for the total Reading and Math from all levels of the MAT were selected as the achievement measure because they were assumed to be comparable across grade levels (see Teacher's Handbook of the MAT). ANCOVA allowed age/grade differences within the samples to be controlled, which was necessary when considering the MAT results.

Teacher marks in reading and math constituted the second type of achievement outcome. The most recent grade in each of those subjects were used for purposes of analyzing differences (i.e., the most current teacher mark received in reading and in math, as opposed to some average grade for the last two years). These data were subjected to an analysis of variance (ANOVA), as it was not necessary to control for age/grade differences within samples.

Similarly, attendance data were subjected to ANOVAs in order to test for differences between samples.

Blocking Variables

In analyzing the data we were interested in testing whether the major samples (D, EMR, RC) differed from one another, but in addition we wanted to determine the relative importance of two other independent variables--ethnicity and sex. Hence, whenever there were sufficient number of cases in each cell, the effects of ethnicity (Anglo, Black, Spanish-surname) and sex were tested in addition to groups (D, EMR, RC).

In some instances, it would be meaningless to compare certain groups. For example, it is not meaningful to compare EMR children in a self-contained class with a different curriculum in reading to RC or D children on teacher marks in reading. Hence, the ANOVA run on these data did not include the EMR sample in the analysis. In other cases, there were simply too few Anglo subjects to warrant their inclusion in the analysis, hence the effect of ethnicity compared only Black and Spanish-surname children. Throughout the report these instances will be noted in both the text and the table titles.

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[1] All bulk achievement test data, teacher marks, etc., are presented in separate tables at the end of this chapter.

Samples

In reporting the data in this chapter, several decisions need be made explicit. First, by the very nature of the matrix of districts sampled (according to size and ethnic composition), many of the districts either did not contain enough cases to allow for Groups X Ethnicity X Sex analyses. In other cases, the ethnic composition of a district resulted in completely empty cells for one ethnic group or another. As a consequence, there were only a few districts (a) which were large enough to contribute sufficient numbers of cases, and (b) which represented a reasonable breakdown in terms of the three ethnic groups and by sex. Two districts (No. 3 & 4) did meet these requirements and enabled us to run ANOVA and ANCOVA within a district having sufficient numbers of males and females in each of the three ethnic groups for each group.

Reporting of Results

As a result of the above, data for each of the dependent measures described earlier were analyzed for (a) the statewide sample as a whole, (b) for District #3 separately, (c) for District #4 separately, and for Districts 3 & 4 combined. In order to report the results of the analyses, the separate analyses will be reported for each of the dependent measures in turn.

Results

Metropolitan Achievement Test

MAT-Reading. Total reading scores for the MAT were subjected to a 2X2X3 ANCOVA (Ethnicity X Sex X Group) with program level serving as the covariate. There were too few cases of Anglo subjects to be included in the analyses. However, tables at the end of the chapter contain the means for all our data.

Table 6.1 is a summary table for the ANCOVA for MAT reading on all sampled districts. The main effects for sex and group were statistically significant. Ethnicity was not. The cell values by group, ethnicity, and sex are shown in Table 6.2. Consistently in all groups and for both Black and Spanish-surname subjects, the reading scores were higher for female subjects. Since there were unequal cell sizes, the most appropriate procedure for making *post hoc* comparisons was that of Scheffe´, which was used in all *post hoc* comparisons presented in this chapter. *Post hoc* comparisons revealed that the three groups (D, EMR, RC) differed significantly ($p < .001$) from one another with RC being the highest, followed by D, and EMR scoring the lowest (respective means 3.80, 3.03, 2.28) in MAT reading.*

Sex and group differences were found to persist when data for District #3 were analyzed separately, as shown in Table 6.3. There were insufficient

Table 6.1

ANCOVA Summary for MAT-Reading for All Districts with Program Level as Covariate

Source	Degrees of Freedom	Mean Square	F	P
(A) Ethnicity	1	0.84	0.82	
(B) Sex	1	8.40	8.28	.01
(C) Group	2	74.12	73.03	.001
A X B	1	1.33	1.31	
A X C	2	0.73	0.72	
B X C	2	0.59	0.58	
A X B X C	2	0.23	0.23	
1st Covariate	1	87.71	86.42	
Error	405	1.01		

Table 6.2

Unadjusted and Adjusted Means for MAT-Reading
in All Districts as Distributed According
to Ethnicity, Sex, and Group

Ethnic Group	Group	Decertified		EMR		Regular Class	
		Male	Female	Male	Female	Male	Female
Black	Unadjusted Mean	2.74	3.08	2.07	2.61	3.39	3.86
	N	39	33	37	20	47	31
	Adjusted Mean	2.87	3.15	2.09	2.56	3.48	3.95
Spanish-surname	Unadjusted Mean	3.07	3.20	2.30	2.41	3.85	4.20
	N	40	40	24	33	42	32
	Adjusted Mean	3.01	3.11	2.27	2.32	3.78	4.17

Table 6.3

Summary of ANCOVA for MAT-Reading in District #3 with Program Level as Covariate

Source	Degrees of Freedom	Mean Square	F	Prob. F Exceeded
(A) Ethnicity	1	0.19	0.46	0.497
(B) Sex	1	5.23	12.77	0.001
(C) Group	2	5.96	14.56	0.000
A X B	1	1.43	3.50	0.065
A X C	2	0.70	1.72	0.186
B X C	2	0.18	0.43	0.651
A X B X C	2	0.06	0.14	0.872
1st Covariate	1	12.22	29.85	0.000
Error	89	0.41		

numbers of EMR subjects in District #4 to allow a similar analysis. The unadjusted and adjusted means for MAT-reading are displayed in Table 6.4 according to group, sex, and ethnic membership. As was true for the results for all districts, females scored higher in reading than males in all three groups and this held true for Black and Spanish-surname samples separately. Consistent with the findings for all districts combined, the post hoc tests indicated the three groups differed from one another ($p < .05$) with the RC scoring the highest (mean* = 3.16), D in the middle (mean = 2.66), and EMR the lowest (mean = 2.19) on MAT reading.

MAT-Math. Total math scores on the MAT were subjected to a 2X2X3 (ethnicity, sex, group) ANCOVA with program level serving as the covariate. When this analysis was performed on the total sample across all districts, the results indicated a main effect for groups (see Table 6.5), with the main effect for sex approaching significance. None of the other main effects or interactions reached statistical significance. In Table 6.6 are shown the unadjusted and adjusted means for total math scores according to groups, sex, and ethnicity. The three groups differed significantly ($p < .001$) from one another on MAT-math; RC subjects scoring the highest (mean = 3.84), followed by D subjects (mean = 3.25), and EMR (mean = 2.26) scoring the lowest.*

Because of insufficient numbers of EMR subjects, District #4 data could not be analyzed separately; however the data for District #3 were analyzed separately, and the results of the ANCOVA are shown in Table 6.7. The effect for group and sex emerged as statistically significant, as did the interaction of Ethnic X Group. The means displayed in Table 6.8 show the nature of that interaction. Post hoc tests revealed that the EMR group (mean = 1.94) differed significantly ($p < .001$) from both D (mean = 3.05) and RC (mean = 3.28); however D and RC groups did not significantly differ from one another. The Ethnicity X Sex interaction was accounted for by the fact that Black males (mean = 2.40) differed significantly ($p < .05$) from both Black females (mean = 3.15) and Spanish-surname males (mean = 3.16). No other pair-wise contrasts reached statistical significance. Across all groups and for both ethnic groups, females scored consistently higher on MAT-math than did males.*

Teacher Marks--Subject Matter

In order to interpret teacher marks meaningfully, the frames of reference used for purposes of grading must be comparable. It was felt that this was not the case when teachers in self-contained special classes assigned grades to EMR children when contrasted to the regular class teacher when he assigns grades for the same subject matter. Despite the fact that a class of EMR children are roughly equivalent to regular class children in terms of age or grade, the level at which any subject matter is being dealt with differs between the two settings so that a grade of "C" in the EMR class where the content for reading is far more basic than in the regular class where another

Table 6.4

Unadjusted and Adjusted Means for MAT-Reading for District #3 According to Group, Ethnicity, and Sex

Ethnic Group	Group	Decertified		EMR		Regular Class	
		Male	Female	Male	Female	Male	Female
Black	Unadjusted Mean	2.16	2.71	2.11	3.25	2.67	3.25
	N	10	11	8	4	11	8
	Adjusted Mean	2.21	2.81	1.89	2.95	2.77	3.39
Spanish-surname	Unadjusted Mean	2.75	3.10	1.96	2.28	3.21	3.53
	N	13	4	5	6	16	6
	Adjusted Mean	2.79	2.95	1.95	2.28	3.20	3.43

Table 6.5

Summary of ANCOVA for MAT-Math for All
Districts with Program Level as Covariate

Source	Degrees of Freedom	Mean Square	F	Prob. F Exceeded
(A) Ethnicity	1	0.23	0.20	0.655
(B) Sex	1	4.27	3.69	0.055
(C) Group	2	77.66	67.05	0.000
A X B	1	1.34	1.16	0.283
A X C	2	0.83	0.71	0.490
B X C	2	2.35	2.03	0.133
A X B X C	2	1.30	1.12	0.326
1st Covariate	1	58.90	50.85	0.000
Error	405	1.16		

Table 6.6

Unadjusted and Adjusted Means for MAT-Math for All Districts According to Group, Ethnicity, and Sex

Ethnic Group	Group	Decertified		EMR		Regular Class	
		Male	Female	Male	Female	Male	Female
Black	Unadjusted Mean	3.05	3.30	2.11	2.57	3.51	3.98
	N	39	33	37	20	47	31
	Adjusted Mean	3.17	3.35	2.13	2.53	3.58	3.95
Spanish-surname	Unadjusted Mean	3.40	3.22	2.34	2.29	3.75	4.32
	N	40	40	24	33	42	32
	Adjusted Mean	3.35	3.14	2.32	2.21	3.70	4.29

Table 6.7

Summary ANCOVA for MAT-Math for
District #3 with Program Level as Covariate

Source	Degrees of Freedom	Mean Square	F	Prob. F Exceeded
(A) Ethnicity	1	0.65	0.98	0.326
(B) Sex	1	3.22	4.89	0.030
(C) Group	2	10.63	16.10	0.000
A X B	1	2.70	4.08	0.046
A X C	2	0.97	1.47	0.235
B X C	2	0.52	0.79	0.455
A X B X C	2	0.33	0.49	0.610
1st Covariate	1	20.22	30.63	0.000
Error	89	0.66		

Table 6.8

Unadjusted and Adjusted Means for MAT-Math for District #3 According to Group, Ethnicity, and Sex

Ethnic Group	Group	Decertified		EMR		Regular Class	
		Male	Female	Male	Female	Male	Female
Black	Unadjusted Mean	2.36	3.07	1.88	3.18	2.85	3.06
	N	10	11	8	4	11	8
	Adjusted Mean	2.43	3.20	1.58	2.79	2.98	3.24
Spanish-surname	Unadjusted Mean	3.30	3.43	1.80	2.00	3.45	3.60
	N	13	4	5	6	16	6
	Adjusted Mean	3.35	3.23	1.79	1.99	3.44	3.47

child receives a "C" in reading. Furthermore, the frames of reference for the two teachers differ as the best pupil in an EMR class may compare very unfavorably with a regular class child in the lower quartile of his class. As a consequence, EMR children are not compared to either D or RC samples in this section, as such comparisons would be meaningless.

As a result, the following data should be considered only to reflect the extent to which the D children are succeeding relative to a sample of children (RC), who were nominated by teachers as achieving in the lowest quartile of their class. Hence, one must be careful not to assume these comparisons are being made with a random sample of regular class students. The RC sample is representative of low performing children in a regular class, but who have never been classified in any special education category. In these data, marks varied from 4 to 0, as described in Chapter IV. The higher value represents a higher mark.

Reading. The most current marks assigned by teachers for reading were subjected to a 2X3X2 (Group X Ethnicity X Sex) ANOVA in order to determine differences between D and RC subjects as they might interact with ethnicity and sex. When this analysis was run on the reading marks for subjects from all districts, the only main effect to emerge as statistically significant was sex (see Table 6.9). The main effect for ethnicity approached significance. Table 6.10 shows the means for the cells in this ANOVA. Of particular interest is the failure to find a reliable difference between the groups (D vs. RC), when such a difference was so consistently found on the MAT-reading results.

When the data for District #3, were analyzed separately, and when the data from Districts #3 and #4 were combined, the results of the ANOVAs performed on the data were essentially identical to those for all districts combined. Table 6.11 shows the summary of the ANOVA for the combined Districts #3 and #4 for reading marks. Again, the main effect for sex was statistically significant, while none of the other effects or interactions reached statistical significance. The mean values are contained in Table 6.12 for the various subgroups. Within each cell, females received high marks from teachers in reading than did their male counterparts.*

Mathematics. The results of the ANOVA on teacher marks for math revealed no differences between D and RC subjects, nor were there any interactions that reached statistical significance (see Tables 6.13 and 6.14). The analyses for all districts combined, for District #3 alone, and Districts #3 and #4 combined all failed to reveal any differences. Hence, the data for all districts and for Districts #3 and #4 combined are shown.

These findings are somewhat at odds with those found for MAT-math. Sex and Sex X Ethnicity interactions emerged on MAT-math, but failed to reach significance on teacher marks for math. While groups reached significance (see Table 6.7) the EMR group differed from both D and RC and the EMR group is not compared on teacher marks for math. The results for all districts combined showed sex approaching significance. The results for District #3

Table 6.9

Summary of ANOVA on Teacher Marks in Reading for All Districts as a Function of Group, Ethnicity, and Sex

Source	Degrees of Freedom	Mean Square	F	Prob. F Exceeded
(A) Ethnicity	2	2.49	2.82	0.061
(B) Sex	1	10.64	12.06	0.001
(C) Group	1	1.96	2.22	0.137
A X B	2	0.45	0.51	0.601
A X C	2	0.46	0.52	0.593
B X C	1	0.13	0.14	0.705
A X B X C	2	0.02	0.02	0.978
Error	359	0.88		

Table 6.10

Means of Reading Marks According
to Group, Ethnicity, and Sex, All Districts

Group	Anglo		Black		Spanish-surname	
	Male	Female	Male	Female	Male	Female
Decertified	3.09	3.31	2.50	3.02	2.55	3.07
N	21	13	52	41	33	27
Regular	2.81	3.00	2.54	2.93	2.43	2.86
N	40	22	48	42	21	11

Table 6.11

Summary ANOVA for Teacher Marks-Reading
for Combined Districts #3 and 4

Source	Degrees of Freedom	Mean Square	F	Prob. F Exceeded
(A) Ethnicity	2	1.70	1.65	0.196
(B) Sex	1	13.06	12.66	0.001
(C) Group	1	2.64	2.56	0.112
A X B	2	0.59	0.57	0.567
A X C	2	1.13	1.09	0.338
B X C	1	1.26	1.22	0.272
A X B X C	2	0.27	0.26	0.773
Error	140	1.03		

Table 6.12

Means for Teacher Marks-Reading
According to Group, Ethnicity, and Sex

Group	Anglo		Black		Spanish-surname	
	Male	Female	Male	Female	Male	Female
Decertified	2.90	3.40	2.20	3.11	2.67	3.86
N	10	5	15	18	21	7
Regular	2.60	2.80	2.33	3.06	2.56	3.00
N	10	5	18	17	18	8

Table 6.13

Summary ANOVA for Teacher Marks-Math for
All Districts and for Districts #3 and #4 Combined

Source	All Districts				Districts #3 and #4 Combined			
	df	MS	F	Prob. F Exceeded	df	MS	F	Prob. F Exceeded
(A) Ethnicity	2	1.41	1.73	0.18	2	1.46	1.72	0.18
(B) Sex	1	0.05	0.06	0.81	1	0.05	0.06	0.81
(C) Group	1	0.04	0.04	0.83	1	0.04	0.05	0.83
A X B	2	0.79	0.97	0.38	2	1.20	1.41	0.25
A X C	2	0.23	0.29	0.75	2	1.01	1.19	0.31
B X C	1	0.32	0.39	0.53	1	0.01	0.01	0.92
A X B X C	2	0.40	0.49	0.61	2	0.19	0.22	0.80
Error	307	0.82			123	0.85		

Table 6.14

All Means for Teacher Marks-Math for All Districts and Districts #3 and #4 Combined According to Group, Ethnicity, and Sex

	Anglo		Black		Spanish-surname	
All Districts	Male	Female	Male	Female	Male	Female
Decertified						
Mean	2.75	2.64	2.46	2.48	2.45	2.67
N	20	11	39	33	29	24
Regular Class Match						
Mean	2.84	2.40	2.31	2.47	2.65	2.64
N	19	10	42	30	34	22
Districts #3 and #4 Combined						
Decertified						
Mean	2.44	2.40	2.33	2.47	2.44	2.17
N	9	5	12	15	18	6
Regular Class Match						
Mean	2.78	3.00	2.06	2.33	2.44	1.88
N	9	4	16	15	18	8

alone (see Table 6.7) revealed differences by group, sex and the interaction of Ethnicity X Sex emerged as statistically significant.

To interpret the results on math marks and sex, we can say that the D children were achieving teacher marks in math that were comparable with those received by the RC sample, drawn from the lowest half of the class. It is of interest, however, that the sex differences that have emerged in almost all previous analyses do not appear in teacher marks for math. One might hypothesize that the teacher and child perceptions of math as a masculine subject matter serve to obscure sex differences that showed up on the MAT-math results; however, this is merely speculative.

Teacher Marks--Citizenship

In addition to assigning marks for subject matter master in reading, math, etc., classroom teachers also assign marks for citizenship. Typically, the citizenship mark is given with each subject matter grade; hence a child received a mark in reading and also a citizenship mark in reading and the same in math.

Citizenship marks presumably reflect the teacher's perception of the child's deportment (attentiveness, misbehavior, neatness, etc.) during the teaching of that subject matter. The questions asked of these data pertain to the difficulty encountered by the D children moving back into a regular class program. With larger class sizes and resultant reduction in close supervision, does the D child evince good work habits, or conversely, does he get into trouble? If such problems exist, do they occur differentially among the different ethnic groups or among the sexes? The citizenship marks provided us with one means of cross checking the responses given by teachers to the teacher questionnaire (see Chapter VIII) pertinent to the behavioral traits of the samples.

As in the case of teacher marks in subject matter areas, citizenship marks are compared only for D and RC samples, as the frames of reference for the EMR teacher differs sufficiently to make any such comparisons meaningless.

Reading Citizenship. Teacher marks for citizenship in reading were analyzed by means of an ANOVA, first run on the data for all districts combined (see Table 6.15). Only one effect emerged as statistically significant, sex. All other effects and the interactions thereof failed to reach significance. Table 6.16 shows the means for the various subgroups in this analysis.*

The results for reading citizenship marks differ when they are considered by district. The results for Districts #3 and #4 combined reveal a different picture, probably due to the specific populations served by these districts, which deviate from the population of our statewide sample. Table 6.17 shows the summary for the ANOVA for District #3 alone and then

Table 6.15

Summary ANOVA for Reading Citizenship Marks for All Districts

Source	Degrees of Freedom	Mean Square	F	Prob. F Exceeded
(A) Ethnicity	2	0.17	0.14	0.873
(B) Sex	1	5.19	4.19	0.042
(C) Group	1	0.17	0.14	0.711
A X B	2	0.70	0.57	0.568
A X C	2	0.35	0.28	0.753
B X C	1	0.003	0.002	0.963
A X B X C	2	2.43	1.96	0.142
Error	265	1.24		

Table 6.16

Cell Means for Reading Citizenship Marks
According to Group, Ethnicity, and Sex

Group	Anglo		Black		Spanish-surname	
	Male	Female	Male	Female	Male	Female
Decertified	3.19	3.50	2.73	3.50	3.24	3.12
N	16	10	40	32	25	17
Regular	3.06	3.14	3.03	3.28	2.91	3.50
N	16	7	34	32	34	14

Table 6.17

Summary ANOVA on Reading Citizenship Marks
for District #3 Alone and for Districts #3 and #4 Combined

Source	District #3				Districts #3 and #4 Combined			
	df	MS	F	Prob. F Exceeded	df	MS	F	Prob. F Exceeded
(A) Ethnicity	2	1.13	0.72	0.49	2	5.00	3.32	0.04
(B) Sex	1	11.34	7.18	0.009	1	13.76	9.13	0.003
(C) Group	1	0.02	0.01	0.91	1	0.01	0.01	0.93
A X B	2	3.63	2.30	0.11	2	3.24	2.15	0.12
A X C	2	1.23	0.78	0.46	2	1.76	1.17	0.32
B X C	1	0.01	0.003	0.96	1	0.05	0.03	0.86
A X B X C	2	1.49	0.94	0.39	2	2.23	1.48	0.23
Error	75	1.58			91	1.51		

for Districts #3 and #4 combined, while Table 6.18 contains the cell means for the respective subgroups. A sex difference was found in both analyses which was also found for the analysis for the whole sample; however, the results for the combined Districts #3 and #4 revealed a difference by ethnicity in addition to the sex difference.* Clearly, girls are assigned higher citizenship marks by teachers in reading which is true for all subgroups except for the Spanish-surname D sample. The most dramatic difference was found for Black D subjects, where the sex difference was most pronounced. Post hoc tests comparing the racial groups revealed that while the main effect for ethnicity in Districts #3 and #4 combined was significant (see Table 6.17), the pair-wise contrasts revealed no differences (means for Anglo, 3.43; Black, 2.85; Spanish-surname, 3.29) in reading citizenship.

Math-Citizenship. Math citizenship marks were analyzed by means of a 3X2X2 (Ethnicity X Sex X Group) ANOVA in order to determine whether D and RC groups differed. In Table 6.19 is summarized the results of that analysis for the entire sample across all districts. While the two groups (D and RC) did not differ with regard to math citizenship, a significant racial difference was found. Unlike the results for reading citizenship, no sex differences were found. Examination of Table 6.20 reveals that when pair-wise contrasts were performed, the difference that emerged as significant ($p < .05$) was between Anglo (mean = 3.29) and Black (mean = 2.76) samples; with neither of these groups differing significantly from the Spanish-surname (mean = 3.08) sample.*

When data for District 3 and that for Districts #3 and #4 combined were analyzed separately (see Table 6.21 and 6.22) the racial difference was still found. Post hoc test revealed that in an attempt to determine what pair-wise contrasts accounted for the main effect of ethnicity found for District 3 alone and for Districts 3 and 4 combined, separate Scheffe´ tests were run. For District 3 alone, none of the pair-wise contrasts reached statistical significance (means, Anglo, 3.39; Black, 2.71; Spanish-surname, 3.17). However, for Districts 3 and 4 combined, Anglo (mean = 3.47) differed significantly ($p < .01$) from Black (mean = 2.61) samples; while Spanish-surname (mean = 3.15) subjects did not differ reliably from either Anglo or Black samples.*

Attendance

In collecting data on attendance in the various districts it was found that there were marked differences between districts in the "goodness" of the records kept. Files were often found to be incomplete or inaccurate. Hence, we decided to use only three districts where attendance records were adequate, Districts #2, 3, and 4. District #3 had the greatest number of cases per cell, so we consider them first. In Table 6.23 is the summary of the 3X2X3 (Ethnicity X Sex X Group) ANOVA, while in Table 6.24 are cell means for the various subgroups. The effect for ethnicity was found to be statistically significant. The absence rate for Spanish-surname students

Table 6.18

Cell Means for Reading Citizenship for District #3 and for Districts #3 and #4 Combined According to Group, Ethnicity, and Sex

	Anglo		Black		Spanish-surname	
District #3	Male	Female	Male	Female	Male	Female
Decertified						
Mean	3.50	3.75	1.83	3.89	3.36	3.33
N	6	4	6	9	14	6
Regular Class Match						
Mean	3.00	3.25	2.67	3.88	3.08	4.00
N	6	4	6	8	13	5
Districts #3 and #4 Combined						
Decertified						
Mean	3.50	4.00	1.56	3.58	3.31	3.33
N	6	5	9	12	16	6
Regular Class Match						
Mean	3.00	3.25	2.44	3.45	3.00	4.00
N	6	4	9	11	14	5

Table 6.19

Summary ANOVA for Math Citizenship Marks for All Districts

Source	Degrees of Freedom	Mean Square	F	Prob. F Exceeded
(A) Ethnicity	2	3.37	3.57	0.030
(B) Sex	1	0.006	0.006	0.935
(C) Group	1	0.03	0.03	0.853
A X B	2	2.16	2.29	0.104
A X C	2	1.27	1.34	0.264
B X C	1	2.67	2.83	0.094
A X B X C	2	0.04	0.04	0.962
Error	204	0.94		

Table 6.20

Cell Means for Math Citizenship Marks for All Districts According to Group, Ethnicity, and Sex

Group	Anglo		Black		Spanish-surname	
	Male	Female	Male	Female	Male	Female
Decertified	3.33	3.38	2.44	3.11	2.81	2.92
N	12	8	27	27	21	12
Regular	3.40	2.80	2.67	2.83	3.38	3.08
N	10	5	27	29	26	12

Table 6.21

Summary ANOVA for Math Citizenship Marks
for District #3 and for Districts #3 and #4 Combined

Source	District #3				Districts #3 and #4 Combined			
	df	MS	F	Prob. F Exceeded	df	MS	F	Prob. F Exceeded
(A) Ethnicity	2	3.55	3.46	0.04	2	6.17	6.52	0.002
(B) Sex	1	0.40	0.39	0.53	1	0.81	0.85	0.36
(C) Group	1	0.30	0.29	0.59	1	0.07	0.07	0.79
A X B	2	1.31	1.28	0.29	2	1.38	1.45	0.24
A X C	2	0.80	0.78	0.46	2	1.19	1.26	0.29
B X C	1	0.55	0.54	0.47	1	0.46	0.48	0.49
A X B X C	2	0.71	0.69	0.51	2	0.43	0.45	0.64
Error	66	1.03			82	0.95		

Table 6.22

Cell Means for Math Citizenship Marks for
District #3 and for Districts #3 and #4 Combined
According to Group, Ethnicity, and Sex

	Anglo		Black		Spanish-surname	
District #3	Male	Female	Male	Female	Male	Female
Decertified						
Mean	3.33	3.25	2.00	3.33	3.00	2.80
N	6	4	4	9	13	5
Regular Class Match						
Mean	3.60	3.33	2.33	2.50	3.38	3.40
N	5	3	3	8	13	5
Districts #3 and #4 Combined						
Decertified						
Mean	3.33	3.60	2.14	3.17	3.00	2.80
N	6	5	7	12	15	5
Regular Class Match						
Mean	3.60	3.33	2.17	2.55	3.36	3.40
N	5	3	6	11	14	5

Table 6.23

Summary ANOVA for Attendance in District #3

Source	Degrees of Freedom	Mean Square	F	Prob. F Exceeded
(A) Ethnicity	2	1656.96	4.96	0.008
(B) Sex	1	7.00	0.02	0.885
(C) Group	2	213.66	0.64	0.529
A X B	2	20.78	0.06	0.940
A X C	4	466.69	1.40	0.237
B X C	2	72.37	0.22	0.806
A X B X C	4	115.15	0.34	0.848
Error	172	334.28		

Table 6.24

Cell Means for Attendance in District #3
According to Group, Ethnicity, and Sex

Group	Anglo		Black		Spanish-surname	
	Male	Female	Male	Female	Male	Female
Decertified	10.82	9.80	7.82	10.82	22.50	28.00
N	11	5	11	11	18	6
EMR	13.34	5.14	13.67	15.00	24.09	25.08
N	11	7	15	10	11	12
Regular	16.36	22.40	19.27	17.64	19.94	17.67
N	11	5	11	11	18	6

statuses and the D and EMR students. Furthermore, chi-square tests were used within the D and EMR categories to test whether differences occurred by ethnicity. An alpha level of .05 was adopted to test the significance of each statistical hypothesis.

Table 6.27 presents the comparative frequencies of D and EMR students in the four adjustments: positive, neutral, negative, and unknowns. Two separate analyses were conducted on each district. The frequencies of the positive and neutral adjustments were combined and compared with the negative adjustments. Since the students in the neutral classification have transferred to another district, they may be assumed to be enrolled in that district's program, thereby having a positive status. However, a second analysis considered only the positive versus the negative adjustments. The transferred students may not have continued with their education or at least not in the same program as in the former district. In both analyses, students of unknown status were eliminated because of their infrequent occurrence in most districts.

The results, comparing positive-neutral against negative adjustments with chi-square tests of independence revealed that significantly more Ds than EMRs had positive adjustments in District 12 only ($\chi^2 = 5.17$, df = 1, $p < .05$). Ds also had more frequent positive adjustments than EMRs when only positive versus negative adjustments were considered in District 4 ($\chi^2 = 6.17$, df = 1, $p < .05$) and District 12 ($\chi^2 = 13.16$, df = 1, $p < .05$).

Separate analyses were conducted within the D and EMR groups to determine whether children of different ethnic groups differed significantly in adjustment patterns. Only Ds from Districts 3 and 4 and EMRs from Districts 3, 4, and 12 were considered because they were the only district-ethnic group combinations having sufficient numbers of more than one ethnic group; most districts in our sample were predominately either Black or Spanish-surname. Only the positive versus negative comparison of the Ds in District 4 ($\chi^2 = 8.15$, df = 2, $p < .05$) and the EMRs in District 12 ($\chi = 7.64$, df = 2, $p < .05$) showed any significant differences. In District 4, the Anglo Ds appeared to drop out in greater proportions than those of the Black and Spanish-surname students whereas Anglo and Black EMRs appeared to leave more than the Spanish-surname students in District 12.

The results presented above clearly indicate that in most districts the adjustment patterns between the Ds and EMRs do not significantly differ; however, in two districts, EMRs were found to have left in greater proportions. Perhaps unique situational variables to the two districts may have caused the EMR students to leave school in greater proportions. The EMR program may have been perceived as ineffective by the special learner and/or his parents, causing a decision to leave school. However, non-educational explanations such as changes in the labor market, and the economy of the area may have added pressures to move into other regions or jobs which forced these students to leave school without reporting these changes to their former or prospective school district. Finally, EMR students may qualitatively differ from the D student in terms of commitment to an educational

Table 6.25

Summary ANOVA for Attendance
for Districts #2, 3, and 4 Combined

Source	Degrees of Freedom	Mean Square	F	Prob. F Exceeded
(A) Ethnicity	2	548.69	1.88	0.154
(B) Sex	1	4.38	0.01	0.903
(C) Group	2	129.88	0.45	0.641
A X B	2	81.75	0.28	0.756
A X C	4	377.05	1.29	0.273
B X C	2	95.97	0.33	0.720
A X B X C	4	190.47	0.65	0.625
Error	322	291.86		

Table 6.26

Cell Means for Attendance in Districts
#2, 3, and 4 Combined According
to Group, Ethnicity, and Sex

Group	Anglo		Black		Spanish-surname	
	Male	Female	Male	Female	Male	Female
Decertified	9.92	8.17	12.15	10.04	15.44	12.92
N	12	6	26	28	27	13
EMR	12.42	7.54	8.73	13.35	16.56	22.56
N	12	13	33	26	16	16
Regular	16.00	18.67	10.10	12.58	15.65	8.86
N	14	6	31	26	23	12

Table 6.27

Status of Decertified and EMR Students, Academic Year, 1973-74

District	Adjustment									
	Total		Positive		Neutral		Negative		Unknown	
	D	EMR	D	EMR	D	EMR	D	EMR	D	EMR
3	354	292	190 (53.7)	132 (45.2)	60 (16.9)	81 (27.7)	77 (21.8)	60 (20.5)	27 (7.6)	19 (6.5)
4	134	192	82 (61.2)	75 (39.1)	30 (22.4)	69 (35.9)	16 (11.9)	35 (18.2)	6 (4.5)	13 (6.8)
6	70	83	48 (68.6)	42 (50.6)	17 (24.3)	37 (44.6)	4 (5.7)	2 (2.4)	1 (1.4)	2 (2.4)
7	36	103	29 (80.6)	51 (49.5)	5 (13.9)	48 (46.6)	2 (5.6)	4 (3.9)	0 (0.0)	0 (0.0)
8	30	36	17 (56.7)	19 (52.8)	5 (16.7)	11 (30.6)	4 (13.3)	5 (13.9)	4 (13.3)	1 (2.8)
10	20	79	10 (50.0)	60 (76.0)	4 (20.0)	14 (17.7)	2 (10.0)	3 (3.8)	4 (20.0)	2 (2.5)
11	76	47	54 (71.1)	35 (74.5)	10 (13.2)	10 (21.3)	12 (25.5)	2 (4.3)	0 (0.0)	0 (0.0)
12	146	186	96 (65.8)	65 (35.0)	13 (8.9)	46 (24.7)	27 (18.5)	51 (27.4)	10 (6.9)	24 (12.9)

(mean = 22.59) was significantly ($p < .05$) higher than that of Anglo (mean = 12.86) and Black (mean = 14.00) samples.* Anglo and Black samples did not differ from one another in attendance.

When attendance data for the three districts (#2, 3, and 4) were pooled and analyzed (see Tables 6.25 and 6.26) no significant main effects or interaction resulted. One might, therefore, interpret the higher absence rate for Spanish-surname subjects in District #3 to be a district phenomenon.

Success of Decertifications Judged by Current Status

Making the assumption that being in school was better than not being in school, it is possible to use the simple criterion of availability for current status study as a crude index of adjustment. In Chapter V attention was called to the data of Table 4.5 in which the D students were more likely to be available than the EMR in some districts. Certainly the available ones had not dropped out (though unavailability might only mean that the student had moved to another school district). By that simple index we could state that the D students were somewhat better off than the EMR.

It was possible to refine the same notion. Delimiting the effort to those eight districts in which there were no problems of either small numbers or purity of initial EMR registrations 1969-72 from which to make random samplings of D and EMR students, we have the data found in Table 6.27. We determined for each student as sampled whether he was in school here or elsewhere, whether he had dropped out, graduated, or whatever, from the cumulative record or attendance record. The data were collapsed to create categories of status used to define adjustment as follows:

1) Positive adjustment. The student is in school somewhere or had graduated.

2) Neutral adjustment. The student has transferred to another school district but it is not known whether he was still in school.

3) Negative adjustment. For students who were under age 16 at the time of the current status study: the student had dropped out or was otherwise of unknown status, without knowledge that he had transferred. The compulsory attendance age in California goes to age 16; thus adjustment could be defined as being in school.

4) Unknown adjustment. Same as (3) for those over 16 years old. A student out of school might be successfully employed; it could not be assumed he was not succeeding.

The frequencies of each category were tabulated and chi-square tests of independence were used to determine whether relationships existed between program. Nevertheless, these data suggest that D students did not leave school in greater proportions than their non-decertified counterparts; this interpretation is reinforced by the high percentage of D students who remained in their district's regular education program.

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*All mean values reported in this chapter for _post hoc_ tests are adjusted means.

TABLE 6.101

TOTAL SAMPLE-CONSOLIDATED DATA

MAT READING TOTAL-GRADE EQUIVALENTS

		DECERTIFIED		EMR		REGULAR CLASS		UNKN./OTHER	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
	M	2.77	3.55	1.82	2.08	3.97	3.75	1.68	2.88
ANGLO	SD	1.53	1.17	1.47	1.70	2.12	2.31	1.43	1.68
	N	30.00	15.00	32.00	33.00	31.00	15.00	20.00	16.00
	M	1.59	1.75	1.10	1.00	2.24	2.21	1.22	1.91
BLACK	SD	1.48	1.64	1.20	1.40	2.04	2.14	1.27	2.41
	N	67.00	58.00	74.00	52.00	71.00	56.00	33.00	24.00
	M	2.19	2.74	1.20	1.62	2.72	3.21	2.00	1.97
SP.SN.	SD	1.66	1.37	1.32	1.25	2.12	2.27	1.78	1.36
	N	60.00	49.00	49.00	49.00	63.00	44.00	44.00	21.00

MAT MATH TOTAL-GRADE EQUIVALENTS

		DECERTIFIED		EMR		REGULAR CLASS		UNKN./OTHER	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
	M	2.81	3.52	1.87	1.83	4.15	3.87	1.73	2.37
ANGLO	SD	1.51	0.66	1.59	1.28	2.04	2.23	1.37	1.78
	N	30.00	15.00	32.00	33.00	31.00	15.00	20.00	16.00
	M	1.86	1.93	1.06	0.99	2.32	2.20	1.35	1.95
BLACK	SD	1.76	1.77	1.17	1.35	2.14	2.17	1.41	2.29
	N	67.00	58.00	74.00	52.00	71.00	56.00	33.00	24.00
	M	2.32	2.63	1.27	1.57	2.50	3.14	1.94	2.15
SP.SN.	SD	1.78	1.54	1.31	1.17	2.03	2.28	1.87	1.57
	N	60.00	49.00	49.00	49.00	63.00	44.00	44.00	21.00

ABSENCES

		DECERTIFIED		EMR		REGULAR CLASS		UNKN./OTHER	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
	M	8.80	4.20	5.22	4.64	8.94	8.13	6.55	7.88
ANGLO	SD	14.54	7.06	3.95	10.16	15.13	14.22	13.88	12.99
	N	30.00	15.00	32.00	33.00	31.00	15.00	20.00	16.00
	M	10.18	8.02	9.89	10.52	9.63	9.48	4.78	7.79
BLACK	SD	13.37	12.12	15.72	12.59	13.91	13.68	12.71	12.50
	N	67.00	58.00	74.00	52.00	71.00	56.00	33.00	24.00
	M	7.97	9.29	6.61	10.92	7.29	5.25	6.25	5.10
SP.SN.	SD	14.86	20.72	18.04	18.74	12.18	9.48	10.54	8.71
	N	60.00	49.00	49.00	49.00	63.00	44.00	44.00	21.00

TABLE 6.101

TOTAL SAMPLE-CONSOLIDATED DATA

READING CITIZENSHIP

		DECERTIFIED		EMR		REGULAR CLASS		UNKN./OTHER	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
ANGLO	M	1.70	2.33	1.75	1.18	1.58	1.47	0.85	1.94
	SD	1.68	1.78	1.95	1.87	1.58	1.59	1.53	1.52
	N	30.00	15.00	32.00	33.00	31.00	15.00	20.00	16.00
BLACK	M	1.63	1.93	1.45	1.63	1.45	1.91	1.36	1.25
	SD	1.68	1.94	1.53	1.85	1.69	1.81	1.72	1.66
	N	67.00	58.00	74.00	52.00	71.00	56.00	33.00	24.00
SP.SN.	M	1.42	1.14	1.37	1.16	1.57	1.11	0.91	1.14
	SD	1.84	1.59	1.77	1.74	1.70	1.70	1.53	1.67
	N	60.00	49.00	49.00	49.00	63.00	44.00	44.00	21.00

MATH CITIZENSHIP

		DECERTIFIED		EMR		REGULAR CLASS		UNKN./OTHER	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
ANGLO	M	1.33	1.80	1.41	1.03	1.10	0.93	0.75	1.13
	SD	1.70	1.87	1.89	1.62	1.67	1.53	1.55	1.45
	N	30.00	15.00	32.00	33.00	31.00	15.00	20.00	16.00
BLACK	M	0.99	1.45	1.53	1.33	1.01	1.54	0.88	1.00
	SD	1.34	1.65	1.69	1.88	1.45	1.53	1.55	1.50
	N	67.00	58.00	74.00	52.00	71.00	56.00	33.00	24.00
SP.SN.	M	1.03	0.76	1.08	1.00	1.40	0.84	0.57	0.62
	SD	1.44	1.41	1.55	1.71	1.81	1.41	1.36	1.36
	N	60.00	49.00	49.00	49.00	63.00	44.00	44.00	21.00

TABLE 6.101

TOTAL SAMPLE-CONSOLIDATED DATA

TEACHER READING MARKS

		DECERTIFIED		EMR		REGULAR CLASS		UNKN./OTHER	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
	M	2.17	2.87	2.03	1.58	1.90	2.20	1.70	1.25
ANGLO	SD	1.57	1.31	1.67	1.61	1.42	1.47	1.68	1.15
	N	30.00	15.00	32.00	33.00	31.00	15.00	20.00	16.00
	M	1.94	2.19	2.24	2.12	1.72	2.32	1.45	1.79
BLACK	SD	1.34	1.56	1.51	1.69	1.40	1.45	1.67	1.66
	N	67.00	58.00	74.00	52.00	71.00	56.00	33.00	24.00
	M	1.43	1.73	1.73	1.47	1.59	1.43	1.73	2.00
SP.SN.	SD	1.49	1.68	1.66	1.59	1.40	1.57	1.57	1.57
	N	60.00	49.00	49.00	49.00	63.00	44.00	44.00	21.00

TEACHER MATH MARKS

		DECERTIFIED		EMR		REGULAR CLASS		UNKN./OTHER	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
	M	1.83	1.93	2.22	1.55	1.74	1.60	1.60	1.63
ANGLO	SD	1.49	1.29	1.71	1.72	1.57	1.36	1.59	1.17
	N	30.00	15.00	32.00	33.00	31.00	15.00	20.00	16.00
	M	1.43	1.41	2.28	1.79	1.37	1.73	0.85	1.42
BLACK	SD	1.40	1.45	1.54	1.77	1.28	1.34	1.21	1.35
	N	67.00	58.00	74.00	52.00	71.00	56.00	33.00	24.00
	M	1.22	1.35	1.63	1.55	1.46	1.32	1.64	1.52
SP.SN.	SD	1.37	1.48	1.59	1.59	1.48	1.46	1.48	1.26
	N	60.00	49.00	49.00	49.00	63.00	44.00	44.00	21.00

TABLE 6.102

TOTAL SAMPLE - GROUPS COMBINED

MAT READING TOTAL-GRADE EQUIVALENTS

	DECERTIFIED	EMR	REGULAR CLASS	UNKN.,OTHER
M	2.19	1.38	2.77	1.87
SD	1.63	1.41	2.23	1.76
N	279.00	289.00	280.00	158.00

MAT MATH TOTAL-GRADE EQUIVALENTS

	DECERTIFIED	EMR	REGULAR CLASS	UNKN.,OTHER
M	2.30	1.34	2.75	1.86
SD	1.72	1.33	2.24	1.78
N	279.00	289.00	280.00	158.00

ABSENCES

	DECERTIFIED	EMR	REGULAR CLASS	UNKN.,OTHER
M	8.63	8.45	8.23	6.22
SD	14.95	14.87	13.13	11.88
N	279.00	289.00	280.00	158.00

READING CITIZENSHIP

	DECERTIFIED	EMR	REGULAR CLASS	UNKN.,OTHER
M	1.61	1.42	1.53	1.18
SD	1.79	1.77	1.72	1.64
N	279.00	289.00	280.00	158.00

MATH CITIZENSHIP

	DECERTIFIED	EMR	REGULAR CLASS	UNKN.,OTHER
M	1.13	1.26	1.18	0.78
SD	1.54	1.73	1.60	1.47
N	279.00	289.00	280.00	158.00

TEACHER READING MARKS

	DECERTIFIED	EMR	REGULAR CLASS	UNKN.,OTHER
M	1.92	1.90	1.81	1.66
SD	1.55	1.64	1.48	1.60
N	279.00	289.00	280.00	158.00

TEACHER MATH MARKS

	DECERTIFIED	EMR	REGULAR CLASS	UNKN.,OTHER
M	1.44	1.87	1.51	1.42
SD	1.44	1.67	1.41	1.40
N	279.00	289.00	280.00	158.00

TABLE 6.103

TOTAL SAMPLE BY GRADE LEVEL

MAT READING TOTAL-GRADE EQUIVALENTS

		DECERTIFIED	EMR	REGULAR CLASS	UNKN./OTHER
	M	2.03	0.78	1.99	0.00
GRADE 4	SD	1.35	0.79	1.22	0.00
	N	16.00	8.00	16.00	0.00
	M	1.99	0.58	2.43	0.00
GRADE 5	SD	0.99	0.87	1.29	0.00
	N	12.00	13.00	12.00	0.00
	M	2.13	1.13	2.41	0.00
GRADE 6	SD	1.16	1.07	1.09	0.00
	N	16.00	20.00	16.00	0.00
	M	2.19	1.31	2.61	0.00
GRADE 7	SD	1.42	1.05	1.76	0.00
	N	38.00	25.00	39.00	0.00
	M	2.63	1.49	2.89	0.00
GRADE 8	SD	1.38	1.24	1.81	0.00
	N	38.00	35.00	37.00	0.00
	M	2.14	2.20	2.70	0.00
GRADE 9	SD	1.83	1.57	2.28	0.00
	N	41.00	23.00	41.00	0.00
	M	2.31	1.98	2.76	0.00
GRADE 10	SD	1.88	1.71	2.75	0.00
	N	43.00	23.00	45.00	0.00
	M	2.17	2.10	3.49	0.00
GRADE 11	SD	1.86	1.43	2.65	0.00
	N	39.00	20.00	38.00	0.00
	M	0.97	2.43	1.62	0.00
GRADE 12	SD	1.50	1.42	2.54	0.00
	N	20.00	17.00	19.00	0.00
	M	3.12	0.93	4.57	1.90
UNKNOWN	SD	0.51	1.27	1.30	1.78
	N	13.00	105.00	14.00	176.00

TABLE 6.103

TOTAL SAMPLE BY GRADE LEVEL

MAT MATH TOTAL-GRADE EQUIVALENTS

		DECERTIFIED	EMR	REGULAR CLASS	UNKN.,OTHER
GRADE 4	M	2.29	0.93	2.09	0.00
	SD	1.74	0.97	1.38	0.00
	N	16.00	8.00	16.00	0.00
GRADE 5	M	2.07	0.74	2.70	0.00
	SD	1.03	1.02	1.32	0.00
	N	12.00	13.00	12.00	0.00
GRADE 6	M	2.37	1.09	2.59	0.00
	SD	1.44	1.09	1.19	0.00
	N	16.00	20.00	16.00	0.00
GRADE 7	M	2.33	1.44	2.62	0.00
	SD	1.54	1.11	1.95	0.00
	N	38.00	25.00	39.00	0.00
GRADE 8	M	2.88	1.66	2.97	0.00
	SD	1.44	1.46	1.84	0.00
	N	38.00	35.00	37.00	0.00
GRADE 9	M	2.44	1.95	2.78	0.00
	SD	1.95	1.25	2.22	0.00
	N	41.00	23.00	41.00	0.00
GRADE 10	M	2.06	1.79	2.43	0.00
	SD	1.75	1.08	2.67	0.00
	N	43.00	23.00	45.00	0.00
GRADE 11	M	2.24	1.91	3.41	0.00
	SD	1.79	1.29	2.63	0.00
	N	39.00	20.00	38.00	0.00
GRADE 12	M	1.08	2.06	1.46	0.00
	SD	1.78	1.43	2.24	0.00
	N	20.00	17.00	19.00	0.00
UNKNOWN	M	3.48	0.92	4.64	1.83
	SD	0.97	1.29	1.90	1.77
	N	13.00	105.00	14.00	176.00

CHAPTER VII

Demographic, Psychometric and Educational Description of Available and Unavailable Decertified and Non-Decertified EMR Students

The major focus of the project was the current status study of D and EMR students who were enrolled in the selected project districts. The students were sampled from the pool of 1969-1972 Ds and EMRs who were known to be enrolled in Spring, 1974, in a district program. The percentage of available D and EMR students in a selected district ranged from 80.5 (District 7, D) to 37.9 (District 4, EMR). The large proportion of students who had left a district posed the problem of whether there were systematic differences between the out-of-district group and those who remained--were there selective biases in the groups of students who were chosen for current study which may account for differences observed on the dependent variables? In order to estimate this bias, two basic studies were implemented. The first was a simple comparison of basic descriptive data (ethnicity, sex, chronological age, and so forth) of the students available for current study in Spring, 1974 and those who were not. The second study involved contacting the districts to which the non-available students had transferred in order to determine whether they had dropped-out and so on. The procedures for conducting these strategies and their outcomes are described below.

Study 1[1]

Subjects and Procedures

The entire population of Ds and EMRs were categorized as available or unavailable in Districts 4, 6, 7, 8, 10, 11, 12, and 13 by a search of district attendance records. (Only samples were used to determine status in Districts 2 and 3; however, Ds in District 2 were not included in the present study because of costly search problems explained in Chapter IV.) Districts 5 and 9 were excluded from the present study because only random samples of currently enrolled Ds and EMRs were selected in those districts, thereby precluding a comparison with students who had left the two districts. These sampling issues are given in Chapter IV.

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[1] Linda Hiser, Staff Research Associate I, assisted in the conduct of this study.

The demographic and psychometric data had been routinely collected as part of the project from either the cumulative or psychological record of each student as follows: a) ethnic background, b) sex, c) chronological age (CA), d) age at EMR recommendation, e) Binet and WISC IQs at the time of EMR recommendation, and f) WISC IQs at the time of decertification recommendation. Variables a through d were collected on both the D and EMR groups. Variable f was collected for the Ds only. For details see Chapter IV.

Results and Discussion

Table 7.1 contains the X^2 values of the relationship between student availability and ethnic background. Four of 17 comparisons were significant, for the following district-group combinations: District 3, District 4, D; District 7, EMR; District 12, EMR. In all of these districts, Anglos were unavailable more often than either the Black or Spanish-surname students. However, in Districts 8, 10, and 11 with a sizeable Anglo population, Anglos were available as often as minority students. The fact that when the differences were significant they were always in the same direction, toward fewer Anglo students available, suggests that some kind of district-specific ethnic differential was operating. It is well known that District 4 had been undergoing a progressive ethnic shift in residential pattern over past years, one that is still in progress, with departure of white families. That fact was not known to be the case so clearly in District 3, but it would be a likely hypothesis there. Other causes may have been economic conditions in an area with ethnic differential effects upon families, leading to moves and school transfers. It is the belief, then, that while there was a differential in availability of Anglo students for follow-up, this difference was district-specific and did not evidently pertain to any variables of this study in a way to require correction or allowance.

Table 7.2 presents the X^2 values and frequencies of males and females by district. Only one significant sex difference was found (District 10, D) which showed that males tended to remain in school more than females. This result is most likely specific to that district, considering the nonreplication of that finding for other districts.

Table 7.3 lists the means and standard deviations for CA for each district. For both groups, the mean CA ranged between 13.66 to 16.20, indicating that most students were typically of junior or early senior high school age. Six of 17 comparisons were found to be significant with the unavailable group being older in five of the cases. This result is not surprising because most of the contribution to the higher CAs for the unavailable group was probably due to increasing drop-out rates as students approach the maximum compulsory attendance age which in California is 16. The sample for current study selection is therefore younger in some districts which qualifies some of the generalizations which may be made to the D and EMR students in general.

Table 7.1

Relationship Between Current Location and Ethnicity of Decertified and Non-Decertified Students in Selected School Districts

	2	3	4	6	7	8	10	11	12	13
Decertified										
N	49[a]	330	133	67	34	28	20	75	101	4
% Available	73.5	57.0	60.9	67.2	85.3	53.6	50.0	70.7	72.3	75.0
% Anglo	0	18.6	9.9	15.6	6.9	33.3	50.0	37.7	5.5	66.7
% Black	100.0	30.9	51.9	0	86.2	13.3	30.0	7.5	8.2	0
% Spanish-Surname	0	50.9	38.3	84.4	6.9	53.3	20.0	54.7	86.3	33.3
% Unavailable	26.5	43.0	39.1	32.8	14.7	46.4	50.0	29.3	27.7	25.0
% Anglo	0	31.0	32.7	9.1	20.0	61.5	30.0	31.8	10.7	0
% Black	100.0	26.1	21.2	0	60.0	0	50.0	0	14.3	0
% Spanish-Surname	0	43.0	46.2	90.9	20.0	38.5	20.0	68.2	75.0	100.0
x^2			16.74	0.12	2.02	3.26	1.00	2.29	1.86	0.5[a]
p			.001	NS	NS	NS	NS	NS	NS	NS
Non-Decertified										
N	56[a]	270	190	77	83	35	74	45	119	5
% Available	53.6	48.1	37.9	51.9	61.4	54.3	79.7	75.6	40.3	
% Anglo	0	34.6	36.1	20.0	13.7	68.4	18.6	38.2	8.3	
% Black	100.0	31.5	44.4	0	66.7	0	62.7	2.9	12.5	
% Spanish-Surname	0	33.8	19.4	80.0	19.6	31.6	18.6	58.8	79.2	
% Unavailable	46.4	51.9	62.1	48.1	38.6	45.7	20.3	24.4	59.7	100.0
% Anglo	0	37.1	40.7	21.6	37.5	43.8	40.0	72.7	21.1	100.0
% Black	92.3	30.0	43.2	0	46.9	6.3	46.7	0	25.4	0
% Spanish-Surname	7.7	32.9	16.1	78.4	15.6	50.0	13.3	27.3	53.5	0
x^2	0.68	0.19	0.54	0.01	6.33	2.85	3.08	4.06	8.23	
p	NS	NS	NS	NS	.04	NS	NS	NS	0.02	

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[a] Fisher's Test

Table 7.2

Relationship Between Current Location and Sex for Decertified and Non-decertified EMR Students[a]

	DISTRICTS									
	2	3	4	6	7	8	10	11	12	13
Decertified-N[b]		354	134	70	36	30	20	75	146	4
N-Available		189	81	47	29	17	10	53	96	3
% Male		63.0	60.5	51.1	58.6	64.7	90.0	49.1	61.5	100.0
% Female		37.0	39.5	48.9	41.4	35.3	10.0	50.9	38.5	0.0
N-Unavailable		165	53	23	7	13	10	22	50	1
% Male		60.0	49.1	65.2	42.9	61.5	40.0	45.5	52.0	100.0
% Female		40.0	50.9	34.8	57.1	38.5	60.0	54.5	48.0	0.0
X^2		0.21	1.27	0.75	0.11	0.04	0.02[c]	0.00	0.85	--
P		NS	NS	NS	NS	NS	.05	NS	NS	--
Non-Decertified-N	88	291	192	82	102	36	79	47	186	--
N-Available	49	131	72	42	51	19	60	35	64	--
% Male	61.2	55.7	59.7	54.8	52.9	52.6	53.3	51.4	68.8	--
% Female	38.8	44.3	40.3	45.2	47.1	47.4	46.7	48.6	31.3	--
N-Unavailable	39	160	120	40	51	17	19	12	122	5
% Male	61.5	56.9	53.3	50.0	56.9	47.1	73.7	50.0	61.5	40.0
% Female	38.5	43.1	46.7	50.0	43.1	52.9	26.3	50.0	38.5	60.0
X^2	0.03	0.01	0.50	0.04	0.03	0.00	1.69	0.06	0.67	--
P	NS	NS	NS	NS	NS	NS	NS	NS	NS	--

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[a] Statistical test not conducted on districts with too few Ns.
[b] Data not presented because of data processing error.
[c] Fisher's Exact Test

Table 7.3

Relationship Between Current Location and Chronological Age for Decertified and Non-Decertified EMR Students[a]

	DISTRICTS									
	2	3	4	6	7	8	10	11	12	1[illegible]
Available										
Decertified-N		189	81	47	29	19	10	54	96	3
Mean CA		14.76	15.97	14.38	13.79	14.88	15.80	13.66	15.26	16.00
SD		1.88	1.89	2.18	2.85	1.76	1.13	2.41	2.04	2.00
Unavailable										
Decertified-N		165	53	23	7	13	10	22	50	--
Mean CA		15.30	15.50	15.73	14.00	15.46	16.20	15.22	15.08	--
SD		1.91	1.81	1.95	1.15	2.22	1.87	2.44	2.12	--
t		-2.68	1.41	-2.52	-0.23	-0.80	-0.58	-2.54	0.50	--
df		352	132	68	34	28	18	74	144	--
p		.01	NS	.05	NS	NS	NS	.05	NS	--
Available										
Non-Decertified-N	49	131	72	42	51	19	60	35	64	--
Mean CA	14.18	14.12	15.45	14.54	14.31	13.47	14.65	14.28	14.40	--
SD	2.21	2.07	2.21	2.68	2.52	2.56	2.40	2.33	2.75	--
Unavailable										
Non-Decertified-N	39	161	120	41	52	17	19	12	122	5
Mean CA	14.82	14.91	14.75	14.80	14.32	16.00	14.84	14.25	15.04	12.60
SD	2.50	2.12	2.19	2.40	2.37	1.93	2.36	2.17	2.23	1.51
t	-1.27	-3.19	2.13	-0.46	-0.03	-3.30	-0.30	0.05	-1.86	--
df	86	290	190	81	101	34	77	45	184	--
p	NS	.01	.05	NS	NS	.01	NS	NS	NS	--

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[a]Statistical test not conducted on districts with too few Ns.

As to psychometric variables, Tables 7.4 and 7.5 contain the Binet and WISC IQs at the time of EMR recommendation for the available and unavailable D and EMR students; Table 7.6 contains similar data for the D students at the time of reassessment. The means and standard deviations of the IQs are noted in the Tables wherever they occur. T-tests were not conducted on comparisons which did not have observations for one of the groups, as in District 10, decertified in Table 4. Only WISC IQs are noted in Table 7.6 because of the infrequent use of the Binet for reassessment in the selected districts.

For the D student, none of the 14 t-tests showed a significant difference in IQ between available and nonavailable students at the time of EMR recommendation; only one of 8 t-tests was significant at the reassessment recommendation. Similarly, only 2 of 17 t-tests performed were significant for the EMR student. Although the IQs at reassessment were not collected for the EMR student, the total number of nonsignificant findings reported above strongly suggest that no differences would have been found for those students if the data had been recorded. In short, these data suggest that the available and unavailable Ds and EMRs are drawn from the same population of students on IQ.

Study 1, conducted in order to compare the available and unavailable D and EMR students on various demographic and psychometric variables, has shown that very few significant differences were found. Those significant findings were usually attributed to district-specific reasons in the cases of ethnicity, and without any particular pattern in sex and IQ. The differences according to CA were most likely due to the natural increase in rate of leaving school as students approach the maximum compulsory attendance age. It was concluded that on the basis of these variables the students available for current study were representative of the total population of Ds and EMRs, and that no systematic bias needs to be allowed for in the interpretation of data secured on available samples of students.

Study 2

The purposes of Study 2 were to conduct: a) a quality check on the student statuses collected in the initial search of school district files and b) a follow-up on a sample of out-of-district students in order to determine whether they were in school or not. The current status of students in the larger study had been gathered from the psychological and attendance records. Other sources located typically in individual school buildings were not consulted; to do so on the entire population of students would have been prohibitively costly and time consuming. This study sampled students in order to conduct a more extensive search of school records to check the accuracy of the statuses found for D and EMR students in the initial identification process.

Given the high percentage of out-of-district transfers, the same sample was searched in order to determine more specifically the current status of those subjects. That is, were they in school and if so, in what program? If the frequency of transferred students remaining in a school program was high, then we may assume that students who remained in a selected school district and those who transferred did not differ. Their current

Table 7.4

Means, Standard Deviations and t-Test Values of Binet and WISC IQs at EMR Recommendation for Available and Unavailable Decertified Students

	DISTRICTS								
	3	4	6	7	8	10	11	12	13
Binet									
Available									
Decertified-N	147	47	18	20	3	2	2	32	2
Mean	71.01	70.87	67.88	69.75	58.33	64.00	77.50	69.90	74.00
SD	4.81	6.10	5.37	7.27	16.04	14.14	10.00	5.49	7.07
Unavailable									
Decertified-N	129	26	5	5	4	--	--	10	--
Mean	71.22	72.57	64.00	67.00	68.25	--	--	71.50	--
SD	4.98	5.20	11.29	8.36	8.30	--	--	3.65	--
t	-0.36	-1.20	1.12	0.74	-1.08	--	--	-0.86	--
df	274	71	21	23	5	--	--	40	--
p	NS	NS	NS	NS	NS	--	--	NS	--
WISC									
Available									
Decertified-N	21	25	26	9	12	7	27	62	2
Mean	70.04	71.44	71.61	69.88	70.66	72.28	71.37	70.05	69.50
SD	5.97	6.07	6.71	5.75	6.08	4.64	5.57	5.98	14.84
Unavailable									
Decertified-N	20	19	17	3	9	8	11	37	--
Mean	68.70	73.26	70.29	74.66	72.22	72.75	73.09	71.70	--
SD	5.26	5.55	8.29	3.78	4.35	4.13	3.83	5.84	--
t	0.77	-1.02	0.57	-1.32	-0.65	-0.21	0.93	-1.32	--
df	39	42	41	10	19	13	36	97	--
p	NS	NS	NS	NS	NS	NS	NS	NS	--

Table 7.5

Means, Standard Deviations and t-Test Values of Binet and WISC IQs at EMR Recommendation for Available and Unavailable Non-decertified EMR Students

	DISTRICTS									
	2	3	4	6	7	8	10	11	12	13
Binet										
Available										
EMR-N	46	100	26	15	35	6	18	9	20	--
Mean	66.67	66.04	68.61	66.26	63.40	64.16	65.94	62.77	60.70	--
SD	5.27	7.64	7.89	6.27	12.35	9.02	9.83	9.85	8.66	--
Unavailable										
EMR-N	36	124	54	10	35	6	9	3	42	2
Mean	65.72	65.97	68.70	68.80	67.45	63.00	69.00	68.33	65.14	70.00
SD	6.70	7.65	8.21	5.67	7.75	5.79	7.48	2.08	8.70	4.24
t	0.72	0.06	-0.05	-1.03	-1.65	0.27	-0.82	-0.94	-1.88	--
df	80	222	78	23	68	10	25	10	60	--
p	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
WISC										
Available										
EMR-N	3	18	39	26	23	14	39	27	29	--
Mean	62.00	64.44	66.25	64.84	60.60	64.78	63.84	66.00	63.06	--
SD	6.24	6.55	8.22	8.25	9.65	7.70	6.59	6.26	8.87	--
Unavailable										
EMR-N	--	23	57	27	25	9	9	10	64	4
Mean	--	67.00	66.52	65.18	67.92	64.77	69.33	65.80	65.48	69.00
SD	--	7.46	6.67	7.09	6.31	6.34	3.87	7.88	8.21	2.00
t	--	-1.15	-0.18	-0.16	-3.13	0.00	-2.39	0.08	-1.28	--
df	--	39	94	51	46	21	46	35	91	--
p	--	NS	NS	NS	.01	NS	.05	NS	NS	--

Table 7.6

Means, Standard Deviations and t-Test Values of WISC IQs at Decertification Recommendation for Available and Unavailable Decertified Students

	DISTRICTS								
	3	4	6	7	8	10	11	12	13
WISC									
Available									
Decertified-N	126	76	39	16	11	9	50	11	3
Mean	78.10	77.71	76.35	78.00	77.09	75.00	76.08	81.60	72.66
SD	7.19	7.93	5.90	9.85	8.40	7.56	4.27	7.55	11.84
Unavailable									
Decertified-N	114	50	16	3	8	8	17	36	--
Mean	77.95	80.36	73.87	88.33	78.50	73.87	76.58	82.88	--
SD	7.97	6.31	6.78	5.77	8.12	6.28	6.50	7.40	--
t	0.15	-1.98	1.36	-1.74	-0.37	0.33	-0.37	-0.85	--
df	238	124	53	17	17	15	65	115	--
p	NS.	.05	NS	NS	NS	NS	NS	NS	--

program status would also indicate their degree of success in the new district. The congruence between their educational status (D or EMR) can also be compared with their current program indicating whether the D had been found in regular classrooms (the most frequent placement of the current status sample). The equivalent question can be asked about the EMR students, that is, whether they continued the EMR enrollment. In short, Study 2 was conducted to verify the accuracy of the data collection procedures in terms of statuses and to analyze the current status of transferred students.

Subjects and Procedures

There were 186 students, 90 decertified and 96 non-decertified EMRs, randomly selected from the samples of the D and EMR students who were known not to have enrolled in Districts 2, 3, 4, 6, 7, 10, and 13 during the 1973-74 academic year. Districts 5, 8, 9, 11, and 12 asked not to be included in the study.

Students were selected in sufficient numbers to characterize districts with sample sizes ranging from 2 to 25 which in some cases constituted the entire list of out-of-district students from those districts. For the sample in each district, the status of each D and EMR student was verified by a search of the psychological and attendance records in the central office, and cumulative and attendance records in the student's last known school building location. A follow-up letter was then sent to the receiving California public or private school requesting information concerning whether the student was enrolled in that school district, and if so, in what program (regular, EMR, etc.). If the student was not attending that district, the most recently known transfer or status information was asked. A second inquiry was made to the next receiving district and continued until a terminal status was achieved such as drop-out, graduate, or unknown status.

We chose not to locate drop-outs, transfers to out-of-California districts, stated transfers with no recorded receiving district, and students with unknown statuses. The results of such a search would have been too costly for the small number of cases in those categories chosen in the total sample (see Table 7.7 of this report). Thus, the follow-up was limited to in-California tranfers with the district recorded in the attendance file. (See Appendix C for the materials used in this study.)

Results and Discussion

Table 7.7 contains the error rate of statuses which were initially noted by the project. "Error" refers to our being provided incorrect information about whether the student was or was not presently enrolled. The percentage of errors in each district ranged for the D and EMR from 0.0 to 36.0 and 0.0 to 33.3, respectively. The overall percentage was

Table 7.7

Percentage of Incorrect Statuses Noted by Project

Decertified	N	% Incorrect
District		
2	20	0.0
3	25	36.0
4	15	13.3
6	13	7.7
7	6	33.3
10	9	22.2
13	2	0.0
TOTAL	90	17.7
Non-Decertified EMR		
District		
2	20	15.0
3	25	8.0
4	15	6.7
6	10	30.0
7	10	0.0
10	9	33.3
13	7	0.0
TOTAL	96	12.5

17.7 for the Ds and 12.5 for the EMRs. The error rate was entirely due to the fact that the school's registration processes could not keep up with a reversal of student status: a student, not available when sampled for current study, later re-enrolled in the same district. The cause of the error was probably the procedures employed for verifying placements. Statuses were initially secured during the Fall semester by noting central office records. Changes most likely occurred frequently during the beginning of the Spring semester, the time of final subject selection. Although school building records were more current, it was too costly to attempt a second review by that method.

The other statuses such as drop-out, graduate, and out-of-state transfer, and unknown were confirmed and the complete distribution of the statuses known for the Ds and EMRs not available for current study are presented in Table 7.8. Of particular interest are the students who were in-state tranfers in either public or private school and reenrollees in a selected district. They comprised 67.7% and 66.7% of the D and EMR samples respectively and were students who were followed by further inquiries sent to receiving school districts. Table 7.9 presents the total number of students in each follow-up sample together with the number of replies to our queries. Of the 61 D students, 55 or 90.2% of the responses were received; 59 or 92% of 64 responses were received for the EMR students. Table 7.10 contains the distribution of the follow-up statuses of D and EMR students as reported by districts to which students had transferred.

Districts did not respond to the follow-up for 6 Ds and 5 EMRs. Responses were received for 9 Ds and 3 EMRs whose statuses were unknown because a) students were no longer attending the districts and whereabouts were unknown and b) the receiving districts stated that the student had never enrolled in one of their schools. In these cases, the search was ended. For the remaining Ds, 46 students were located in a California school of whom 35 were in regular class, 6 in EMR and 5 in other placements (EH, continuation school). The 58 located EMRs were typically found in EMR (n = 37) or in other special classes (n = 13) with 2 students in regular class and 4 in either continuation school or transfer to an out-of-state district. These findings are significant because they indicate a continuity of D classification with attendance in regular class and of EMR status with EMR or other special class enrollment. Since Ds in the samples for current study were in general found in regular class and EMRs in EMR classes, there appeared to be no difference between the availables and unavailables as to current placement in school. As a measure of success, the Ds do not appear to return to special classes in any great proportions. They enroll and are maintained in the regular class.

Summary

Two studies were conducted in order to estimate the differences between available and unavailable D and EMR students which could potentially contribute to selection biases for the current study samples. The

Table 7.8

Distribution of the Statuses Known for Decertified and Non-decertified EMR not Available for Current Study

District	N	Re-enrolled	In-State Transfers	Private Schools	Total Pool of Transfer Students	Out-of-State Transfers	Moved- No Request	Drop-Out	Graduated	Unknown No Record of Status
Decertified										
2	20		17	1	18			2		
3	25	9	10		19	1	2	1		2
4	15	2	4		6	4	2	1	1	1
6	13	1	5		6		2		2	3
7	6	2	1		3		1	1		1
10	9	2	5		7	1				1
13	2		1	1	2					
TOTAL	90	16	43	2	61	6	7	5	3	8
Percent		17.7	47.8	2.2	67.7	6.7	7.7	5.6	3.3	8.9
Non-Decertified										
2	20	3	9	3	15	1	2			2
3	25	2	10	1	13	3	1			8
4	15	1	7		8	2	3	1	1	
6	10	3	4	3	10					
7	10		4		4	4			1	1
10	9	3	4		7	1			1	
13	7		5	2	7					
TOTAL	96	12	43	9	64	11	6	1	3	11
Percent		12.5	44.8	9.4	66.7	11.5	6.3	1.0	3.1	11.5

Table 7.9

Distribution of the Number of Replies to Letter Inquiries About the Transfers of Decertified and Non-Decertified EMR Students

	DISTRICTS							
	2	3	4	6	7	10	13	Total
Decertified								
Number of Inquiries	18	19	6	6	3	7	2	61
Number of Replies	18	19	5	4	3	5	1	55
Percent Replies								90.2
Non-Decertified								
Number of Inquiries	15	13	8	10	4	7	7	64
Number of Replies	15	12	8	8	4	5	7	59
Percent Replies								92.2

Table 7.10

Distribution of the Status of Decertified and
Non-Decertified EMR as Reported by Districts to Which
Students Had Transferred

District	N	Regular Class	EMR	EH	Social Adjustment	Other Special	Continuation School	Out-of-State	Unknown	No Replies
Decertified										
2	18	11	3	2			2			
3	19	16	1						2	
4	6	2		1					2	1
6	6	1							3	2
7	3	2							1	
10	7	3	2							2
13	2	—	—	—	—	—	—	—	1	1
TOTAL	61	35	6	3			2		9	6
Non-Decertified										
2	15	1	11		3					
3	13	1	6	1		2	1		1	1
4	8		4			1	1	1	1	
6	10		5			3				2
7	4		4							
10	7		4						1	2
13	7	—	3	1	—	2	1	—	—	—
TOTAL	64	2	37	2	3	8	3	1	3	5

first study compared entire population of available and unavailable students within the D and EMR groups on demographic and psychometric variables. Very few differences were found; those that occurred were attributed to district-specific reasons. A second study verified the statuses initially collected on students with exceptions solely due to re-enrollments of students in their own districts. Otherwise, statuses were accurate. For groups of California tranfers, most D students were attending regular class with infrequent placements in EMR classes. Just the opposite was found for the EMRs who were rarely in regular class and were enrolled in various special education classes, most frequently. In short, the two unavailable groups appeared similar in placements and on demographic and psychometric variables with the available D and EMR students selected for current study.

CHAPTER VIII

Teacher Perceptions of Transition Program and Children

The investigators considered the teachers as valid sources of information on the educational success of the students in the study and as having worthy inputs on the value of the transition program. A questionnaire was sent to every teacher in whose present class was one or more of the subjects in the study. It was our desire to obtain the perceptions of teachers regarding: (a) education of the children, and (b) the process involved in the transitional program.

It has been the position of these investigators (MacMillan, Jones, & Meyers, 1975; Meyers, MacMillan, & Yoshida, 1975; MacMillan, 1975) that any evaluation of mainstreaming must consider not only the impact of the mainstreamed children and the regular education program but also the EMR children who remain behind in the special class and the EMR program. In keeping, the perceptions of both teachers of regular class and EMR were solicited. In this way, it was felt that it was possible to get a more global perspective and make it possible to cross validate other findings.

Pertinent Literature

There is widespread agreement that the regular class teacher will play an important role in the success of any mainstreaming effort (MacMillan et al., 1975; Martin, 1974). However, there is considerable variability as to the specific role these teachers should play, and even pessimism expressed regarding their willingness to adapt their own teaching in order to accommodate mainstreamed children (Melcher, 1971).

The impetus for mainstreaming did not come from the rank and file of teachers; rather, it was mandated by the courts, imposed by legislators, and extolled by some in institutions of higher learning and state departments of education. The fact remains that it is the classroom teacher who is left to either make or break the policy of mainstreaming through their implementation. It remains to be seen the extent to which regular class teachers see mainstreaming as a potentially beneficial program for: (a) the mainstreamed children, and (b) the regular class children into whose classes the mainstreamed children are placed.

Martin (1974) described the teachers, aides, and building principals as possessing anxieties, which he attributed to their lack of experience with the children to be mainstreamed. MacMillan et al. (1975) noted the absence of any required course-work on exceptional children in the credential requirements of most states. Moreover, most teachers lack previous exposure to the children now being mainstreamed. The fears and anxieties of regular class teachers are manifested in contracts negotiated (Melcher, 1971; Seitz, 1971; [illegible]snowsky & Coleman, 1971) which frequently included a clause prohibiting the assigning responsibility for the handicapped to the regular class teacher. One might reason that in the previous absence of real children, teachers respond to stereotypes of the various handicaps and would respond more favorably to actual children.

Some evidence is available on teacher attitudes towards handicapped children integrated into regular classes (Shotel, Iano, & McGettigan 1972). Comparisons were made between teachers attitudes towards integration in schools employing different delivery systems: (a) those using resource rooms where special services were provided for EMR, ED, and LD children, and (b) those where self-contained special classes were used exclusively. Using a pre-test post-test design it was found that teachers in schools with resource rooms expressed attitudes which were less positive toward resource room placement, and were more pessimistic about the child's potential for normal academic achievement and social adjustment. While the results were variable between ED and LD groups, the teachers in general expressed greatest optimism for the integration of LD children into regular programs and the least for EMR children. Integration had little, if any, effect on teacher attitudes regarding EMR students.

Since the present project deals exclusively with former EMR children, the findings of the study by Shotel et al. (1972) are particularly pertinent and underscore Martin's (1974) contention that the affective area is going to require considerable attention. Moreover, one must be cautious about generalizing findings on mainstreaming with one group (e.g., EMR)to other groups (e.g., LD).

Another concern of the present investigators pertains to the teachers in EMR programs, who prior to the trend toward mainstreaming enjoyed little status (Jones & Gottfried, 1966). When teachers rated the prestige of teachers of various exceptionalities (e.g., blind, deaf, EMR, TMR), the EMR teachers were rated very low by colleagues and individuals in teacher training. Moreover, the teachers of EMR children rated themselves lower than they were rated by regular class teachers. A central concern to the present investigation was the impact of taking out of the EMR class presumably the higher ability children. What were the consequences for the continuing EMR program?

Information Sought

An examination of the questionnaires available in Appendix B will show the specific items. In developing the questionnaire the investigators sought certain information regarding the children being transitioned, whether children remaining in EMR status are in the judgment of the teachers capable of regular class, what effect the loss of the more able children had on the EMR class and conversely what effect the introduction of the transitioned children had on the regular program.

In addition, the general impressions of the transition process were sought from teachers as to the good points, mistakes, problems, etc. that they perceived.

In order to present these data, this section will be organized as follows: teacher perceptions of programs, teacher perceptions of children in T and EMR programs, and teacher perceptions of the transition process.

Procedures

A written questionnaire was sent to every teacher of all three samples (EMR children who were not decertified, decertified (D), and regular class match for the decertified (RC). The specific questions asked varied somewha as can be seen in the questionnaires contained in Appendix B. Upon return of the completed questionnaire the teacher was sent $3 for their cooperation.

The return rate on the questionnaire was high for all three sets of teachers, a finding true across districts. The total number of teachers responding in each of the three categories was as follows:

a) Teachers of D children n = 252

b) Teachers of EMR children n = 257

c) Teachers of RC children n = 250

For purposes of reporting the results, the following initials will be used to designate the groups of teachers: T-D, T-EMR, and T-RC.

Results

Teacher Perceptions of Programs

EMR Program. The teachers who after the wave of decertification were still teaching a self-contained EMR class were asked a series of questions pertaining to the impact of removing a large number of former EMRs and returning them to the regular education program. Of the 257 T-EMR responding to the questionnaire, 200 had been teaching EMR classes in 1969 prior to the onset on the transitional program. These 200 T-EMR were asked to indicate how the transitional program affected the EMR class, and in Table 8.1 are the summarized results.

Table 8.1

What Affect Did the Reassignment of EMRs Have on The EMR Class?

	Freq.	%
Lowered the average learning level	154	59.9
Reduced behavior problems	65	25.3
Increased behavior problems	28	10.9
Took away some good in-class helpers	61	23.7
Other	43	16.7

It is clear that the major impact on the EMR class was to lower the general ability level in the class, which comes as no surprise given the extensive use of IQ as the determining factor in who would be transitioned. To a lesser extent, the reduction of behavioral problems and the loss of in-class helpers were seen as consequences. The reduction of behavior problems might reflect a major determinant of EMR placement where IQ was marginal at the time of original placement. On the other hand, those children who returned to the regular class exhibiting misbehavior may also represent "hard to integrate" children. The most frequent comments in the "other" category regarded the increased homogeneity of the classes, smaller class sizes, and the children remaining behind needed more individual attention.

Another effect was that since the number of EMR classes was reduced drastically, more and more there was only one EMR class in a given building. One theme that came through is exemplified by the following, "One teacher on campus doesn't provide for interaction with others in the field... It has become lonely--professionally." A considerable number of respondents favored the result because the remaining children did not pose the discipline problems apparent in the transitioned group. Others saw the remaining children as more difficult because of a higher prevalence of distractibility, hyperactivity, and other characteristics these teachers associated with more patently disordered children.

In reading comments made by teachers of EMR classes one senses a certain protectiveness with references to students being "pushed back into regular classes when they were unprepared," to "causing drop outs because of new program," "a good program going down the drain," "children who were transitioned are being looked down on by more able," "Long live the (EMR) program."

A minority of EMR teachers applauded the entire process as shown by the following: "Phased out and rightly so, the program damaged more than repaired childrens (sic) minds," and "I believe that the change will cause the pupils envolved (sic) to become better fitted (sic) in society."

Regular Program. Regular class teachers who had transitional EMRs in their class were asked whether having a transitional child had any impact on the teacher's instruction for the rest of the class; 59.1 per cent (149) responded that they felt it did not impact their instruction for other students whereas 29 per cent (73) thought it did. When asked to specify how having an EMR T child affected their class, the results are summarized in Table 8.2.

These data reflect only those 73 teachers who indicated that having EMR-T child did affect the program. For them, extra assistance in the form of direct instruction and preparing materials proved the most common hardship--discipline ranking lower. This would seem to indicate that the perception of EMR teachers about the high incidence of behavior problems in this group was not shared by the teachers working with them in the regular class--or that the frames of reference differ and the behavior exhibited may be more typical in these regular classes.

Table 8.2

How Was Your Class Affected by Having EMR-T Child in Your Class?

	Freq.	%
Extra assistance had to be provided	49	67.1
Class disruption through his behavior	39	53.4
Others picked on him	19	26.0
Had to prepare materials specifically for him	42	57.5
Take time to work with aide, tutors, volunteer, etc.	31	42.5
Other	19	26.0

In teachers' evaluation of the materials they had used before the transitional program for working with the decertified EMR children several common themes emerged. First, teachers frequently indicated that they did not have to adapt materials for individual children (i.e., transitioned EMR) for one of two reasons--usually because the class into which they were placed was functioning at very low levels and the materials they had used (books, work sheets) worked fairly well with transitioned EMRs; or in some cases, the transitioned child was portrayed as a capable learner for whom adaptation of materials was not necessary. Another common response was that there was a need to individualize instruction for these children and when an aide worked with him on a 1 to 1 basis the child performed. The most common response elicited by this question (although it is only tangential to the issue) was that materials were not provided for the teacher (in one district, the teachers did praise the central office staff for providing materials) by the district; thereby necessitating teachers to generate their own.

When asked how instructional techniques worked with this group of children, teachers indicated difficulty in group discussion, independent reading, and the need for greater structure. The greatest success was reportedly through 1 to 1 tutoring by an aide or volunteer. A frequent teacher comment was they they did not know the child was a transitioned EMR--e.g., "until this questionnaire arrived, I didn't know _____ was one of them!", "I wasn't told student was a transitional student;" "I was never informed that J. was part of a program."

Summary

There was in the opinion of EMR teachers a definite impact of the decertification program in California. First, the ability level of EMR classes became much lower but so did the incidence of behavior problems. On the other hand, receiving teachers do not seem to sense a great impact of having these EMR-T children in their classes: however for those who do they felt it mostly in instructional rather than the disciplinary arena.

Teacher Perceptions of Children in Programs

Children in EMR Program. After the extensive re-evaluation of children in EMR programs between 1969-71, we were interested to know, in the judgment of EMR teachers, whether any of the sampled children remaining in EMR programs could succeed in a regular program. A majority of 64.2 per cent (165) responded "no" that there were none who could; while 23.7 per cent (61) indicated that the child could succeed only if given transitional help; and 8.2 per cent (21) felt the child could succeed even without transition help. However, when asked whether the teacher felt the child would be better off staying in the special class, 73.2 per cent (188) said he was better off in the special class and only 12.8 per cent (33) indicated "no."

Children in EMR and Regular Programs. Several questions asked of teachers about sampled children were asked in such a way as to require the teacher to compare the subject's standing to their classmates. It is important to note that the frame of reference differs markedly for T-EMR and both T-D and T-RC. Comparisons of achievement and /or adjustment as perceived by teachers from EMR settings to those of D or RC children are meaningless given the differing frames of reference of the teachers. However, it is legitimate to compare D and RC children as the settings are comparable along several dimensions. The results will be presented for all three groups of teachers: however, caution is urged in making comparisons of EMR to the other two samples.

Prior to presenting the results of teacher perceptions about children in regular programs it is essential to describe the classes in which these children are presently enrolled. T-D and T-RC were asked to characterize the class in which D and RC subjects were enrolled. Table 8.3 contains a summary of teacher responses. Although a teacher of a D student was also to respond to the matched RC student as well and provide control data, nevertheless for various reasons slightly discrepant results such as numbers, etc. crept into the data, mostly because a teacher might have left some parts of a questionnaire incomplete or had two or more RC children for a D, etc. Most of the discrepancies, as shown in Table 8.3 are trivial and can be ignored.

Table 8.3

Ability Levels of Classes in Which D and RC Subjects Are Enrolled

	Transitional (D)		Regular Class Match	
	Freq.	%	Freq.	%
No response	8	3.2	9	3.6
Predominately high ability group	2	0.8	2	0.8
Predominately low ability group	142	56.3	139	55.6
Combination of various ability groups	100	39.7	100	40.0

Based on these data, one is led to conclude that when EMR children were mainstreamed they were put into low ability classes or heterogenious classes. In addition, as based on teacher estimates, the comparison of D and RC subjects is valid since the referent groups are controlled. Further support for the conclusion that the former EMR children were placed into lower ability classes is shown in Table 8.4.

Table 8.4

Teacher Perceptions of the Proportion of Students
In Their Class Believed or Known to Read at
or Above Grade Level

	Transitional (D)		Regular Class Match	
	Freq.	%	Freq.	%
No response	14	5.6	14	5.6
More than half	21	8.3	21	8.4
About half	28	11.1	28	11.2
Under half	40	15.9	41	16.4
Very few	149	59.1	146	8.4

It should be reiterated that the EMR class, after D children were removed comprised of children with quite low levels of ability and the regular classes in which D and RC subjects are enrolled are low ability classes. The following results on teacher perceptions of subjects level of performance should be interpreted with these factors in mind.

Table 8.5 contains the tabulations on teacher judgments of the child's achievement and social acceptance relative to the child's classmates.

Table 8.5

Teacher Judgment of Subject's Achievement and
Social Acceptance Relative to Subject's Classmates

I. Achievement Level

	Transitional (D)		Regular Class Match	
	Freq.	%	Freq.	%
No Response	4	1.6	9	3.6
Very Low	76	30.2	42	16.8
Below Average	96	38.1	94	37.6
Average	47	18.7	80	32.0
Above Average	25	9.9	23	9.2
Highest	4	1.6	2	0.8

Table 8.5 (con't)

II. Social Acceptance

	Transitional (D)		Regular Class Match	
	Freq.	%	Freq.	%
No Response	4	1.6	9	3.6
Very Low	27	10.7	12	4.8
Below Average	54	21.4	39	15.6
Average	124	49.2	121	48.4
Above Average	40	15.9	63	25.2
Highest	3	1.2	6	2.4

The distribution of achievement ratings by T-D would indicate that the transitioned EMR subjects is skewed below average, which is also the case for the regular class match subjects, but not to the same extent. Keep in mind that a D student is compared with classmates who are on the whole seen by their teachers to be well below average. Nevertheless, when a χ^2 test was computed on teacher ratings of achievement of the D and RC subjects ($\chi^2 = 19.00$, df = 4, $p < .001$), it revealed that the D and RC are independent samples with RC subjects being seen as more capable in the area of achievement. Similarly, the D students are perceived to be as a group slightly below average in social adjustment, in contrast to the regular class match subjects for whom the distribution of teacher ratings is negatively skewed. A χ^2 test was run on the social acceptance ratings given by teachers to D and RC subjects ($\chi^2 = 14.06$, df = 4, $p < .01$), which revealed that teachers perceived the RC subjects as being socially accepted to a greater degree than D subjects.

The teacher perceptions of our EMR sample indicate that as a group they are a fairly representative sample of EMR children after decertification in terms of both achievement and social adjustment. This conclusion is based on distributions shown in Table 8.6

Table 8.6

EMR Teacher's Judgment of EMR Ss Achievement and Social Acceptance Relative to EMR Classmates

	Achievement Level		Social Acceptance	
	Freq.	%	Freq.	%
No Response	3	1.2	4	1.6
Very Low	41	16.0	25	9.7
Below Average	61	23.7	47	18.3
Average	74	28.8	109	42.4
Above Average	58	22.6	56	21.8
Highest	20	7.8	16	6.2

It may be instructive to note those few cases identified by the teachers of transitioned EMR children who are among the "highest" in their class in achievement (4) and social adjustment (3).

It was felt that another index of the child's assimilation into the program that could be obtained unobtrusively were data on disciplinary referrals, absence and tardiness. The complete breakdown is available in Appendix B. Across all three samples, it is clear that the majority of children have never been referred to the principal or other disciplinary official (EMR - 60.3%; D - 71%; RC - 68%). The distributions for the three samples do not differ dramatically from one another, and there exist a few extreme cases in each sample - one D child referred 90 times according to the teacher. All three samples have a comparable absence rate with the RC having 34% in the combined categories of "often" and "frequently" as compared to 26.5 per cent for EMRs and 26.2 per cent for D samples. Similarly, there are no dramatic differences between the three groups on the number of times they have been tardy.

One finding that does differentiate the samples pertains to the number of parent contacts about the child during the school year. Parents of EMR children seem to initiate contact with teachers more frequently than do parents of children in the transitional program or RC children. T-EMR reported that the parents of 51.8 per cent of the EMR sample had contacted the teacher during the school year about their child; compared with 15.1 per cent for parents of transitioned subjects and 17.2 per cent of RC subjects. One might interpret these findings in terms of differences between parents (e.g., social class differences, parent educational level), however the most probable reason is the legal requirement of a regular home contact for special class children, leading to greater readiness for the parents to visit. In response to the question, "how many times have parents contacted you about the student's special learning needs?" The following results were found in Table 8.7.

Table 8.7

Number of Times Parents Contacted Teacher
About the Student's Special Needs

	EMR	D	RC
No. Contacts	Frequency	Frequency	Frequency
1	37	10	17
2-3	67	19	18
4-5	13	7	7
6+	13	1	1

Teacher Perceptions of the Transitional Program

Several questions were designed to solicit the impressions of teachers regarding the transition program itself. It may be necessary to reiterate that the nature of the "program" was decided at the district level resulting in quite different models (e.g., paraprofessional aides, resource room teachers) across districts, as well as considerable variability in the specifics of implementation within any given model. First, T-EMRs were asked their impressions regarding the success of the transitional program, and the results are summarized in Table 8.8.

Table 8.8

T-EMR Impressions of the Success of the California Transitional Program

	1. There was unqualified success in the regular program for:		2. Academic difficulty was experienced in the regular program for:		3. Behavioral problems occurred in the regular program for:		4. Unqualified acceptance of D students was given by regular teachers for:		5. Unqualified acceptance of D students was given by regular class peers for:	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
No Response	1	0.1	0	0.0	0	0.0	2	1.0	1	0.5
All (90-100%)	1	0.1	30	15.7	13	6.8	1	0.5	0	0.0
Most (50-89%)	30	15.7	98	51.3	33	17.3	54	28.3	49	25.7
Some (10-49%)	37	19.4	25	13.1	55	28.8	41	21.5	46	29.3
Few (< 10%)	87	45.5	3	1.6	47	24.6	50	26.2	30	15.7
Don't Know	35	18.3	35	18.3	43	22.5	43	22.5	55	28.8

In general teachers of the EMR painted a bleak picture regarding the success of that program. In their judgment relatively few transitioned EMRs had unqualified success in the regular program, with a high per cent experiencing academic difficulty. Further, T-EMR did not perceive behavior problems to be so serious a problem for transitioned EMRs as academic problems. This may be at odds with their earlier description of the decline in behavior problems in the EMR class after the transitional program was instituted. T-EMRs appear to feel that regular class teachers and peers were accepting of the transitional children, although not in all cases.

Both teachers of EMR and D children were asked their impressions of how the transional program benefitted the transitioned children. Table 8.9 contains the responses of the T-EMR and T-D.

Table 8.9

T-EMR and T-D Perceptions of the Transition Program
For the Transitioned Child In the Program:

	T-EMR		T-D			
	Freq.	%	Freq.	%	χ^2	p
Help him stay in school	77	30.0	14	5.6	49.97	< .001
Aid him in coping with regular academic program	116	45.1	31	12.3	65.20	< .001
Help him adjust to different school situations	100	38.9	26	10.3	54.32	< .001
Other	88	34.2	14	5.6	--	--

Clearly, T-EMR and T-D differ from one another in the extent to which they perceived the transitional services to benefit the transitioned child. In all three cases the teachers of the EMR children viewed the program as being more helpful than the regular class teachers who had D children in their class. It would appear that those closest to the services (i.e., regular class teachers) value the services the least--if indeed, services were delivered (this will be discussed subsequently). On the other hand, the EMR teachers perceived the services in a more favorable light. The "other" category allowed teachers to specify additional ways in which the program was seen as beneficial, and a few EMR teachers indicated that the children were improved in "self-concept," however most who wrote used the chance to express concerns over the possible harm being done to the children. An example, "Was a colossal (sic) disaster with the kids getting the biggest shaft," and "This program has to be the biggest educational disaster of all time." Sixteen of the comments either expressed surprise that any "program" existed, or indicated that services were superficial and of no benefit to teacher or child. ("I was unaware of any program," "There was absolutely no transition program of any kind at our school.")

One of the last series of questions posed to T-D identified the child as a transition student (that fact was not mentioned earlier in the questionnaire, we assumed the teacher knew which children were transitional children since services were being made available), and asked the manner in which help was given--to the teacher, to the child, or a combination. Table 8.10 summarizes the responses of T-D to this question:

Table 8.10

T-D Responses to the Form of Transitional Help

	Freq.	%
No Response	20	7.9
It was of great value	44	17.5
It was somewhat helpful	64	25.4
It was of little or no value	31	12.3
Does not apply, no help given to me	93	36.9

Fewer than half of the teachers receiving transitioned children perceived the services as somewhat helpful or better. It is evident that in general the special services provided in California under the auspices of the transition funding were perceived by the teachers as of marginal usefulness if they were provided at all. In order to get a description of the kinds of models employed, the teachers of transitioned children were asked to identify what kind of assistance was ever provided; the responses are contained in Table 8.11

Table 8.11

Types of Support or Assistance Provided*

	Freq.	%
Volunteers	19	7.5
Instructional Aide	68	27.0
School district tutors (resource teachers)	55	21.8
Resource rooms	25	9.9
Case history information	61	24.2
Resource Teacher Consultation	40	15.9
Other	30	11.9

The hiring of paraprofessional aids, use of resource teachers, and the presentation of case history information to help teachers understand the needs of the child (by a counselor or other personnel) were the most frequent forms of support provided. These findings based on teacher's perceptions coincide rather closely with the reports of district administrators (Keogh, Levitt, Robson, Chan, 1974). One placement option that administrators reported (placement in classes for the educationally handicapped-EH) did not appear in the teacher data, probably because they were not aware of that option.

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*Options are not mutually exclusive. Some districts used more than one form of support.

Summary

The information gathered from classroom teachers reveals that by removing D students from the EMR classes has resulted in a lowering of the general ability level in the EMR class. Regular class teachers did not perceive a tremendous impact of D children, however, of those who did report an impact it was primarily in terms of time and effort devoted to individualizing, with some reporting trouble with misbehavior.

Another finding of importance was the reliable difference between D and RC subjects. Despite the very low achievement level of RC subjects, teachers reported that the achievement and social adjustment of D children was lower as a group than was true of RC subjects. Hence, the teachers perceptions of D children indicates that as a group they do differ significantly from the lowest achieving children in the regular class (data on achievement test performance collected by this project support this judgment).

Finally, teacher impressions of the California transitional programs revealed considerable criticism by regular class teachers and optimism by EMR teachers. One might characterize this finding as those who are closest to the services were most critical of the quality. The program sounded good to EMR teachers. The most surprising result was the frequency with which regular class teachers expressed surprise at finding out that a child in their class was a D child and also how often teachers reported that there was "no" service.

CHAPTER IX

The Use of Standardized Achievement Batteries with EMR, Decertified, and Mainstreamed Learning Disabled Students

Chapter VI contains results pertaining to the success of the decertified former EMR students in their mainstreamed (or other) placement. A principal basis for the assessment of their educational progress was the Metropolitan Achievement Test (reading and arithmetic). The selection of a standardized instrument was intentional (as pointed out in Chapter IV) in that (a) it provided a basis for ultimate comparison with results of the PRIME study in Texas, (b) at least one nationally standardized, well validated achievement measure was desired (in addition to teacher marks, etc.), and primarily (c) mainstreamed students are being assessed by the same measures specified by state or district order as used for the non-handicapped students. In California, for example, it is the law.

The case for the use of standardized instruments to measure academic growth can be made easily. Tests such as the Metropolitan Achievement Test and the California Tests of Basic Skills have a number of significant advantages over the alternate, teacher-made methods where assessment is done in groups. Their uniform administration and scoring add to the validity of results, as do meticulous construction and established norms. Local norms can be derived, while accurate comparison is possible on a broader scale (Mehrens, & Lehmann, 1973). The sophistication of these well-designed batteries, with established validity and reliability, make them highly desirable instruments for assessment. There are, perhaps, advantages over even the individually-administered achievement measures. As Cronbach (1970) states, "The technical quality of a group test may be superior to that of the usual individual test, if only because research on a truly large scale is practical during the development of a group test," (p. 268). The selection of the MAT was in part due to its greater usability with handicapped students, and also because it was employed in the PRIME study. However results determined with the MAT might well be true with other nationally standardized batteries.

One may question employment of such a battery with students recently in a segregated class where they did not participate in standardized group-test practice, and who are placed in a grade level which could be as many as five grades above their current reading. In California the experience in testing mainstreamed "educationally handicapped" (EH) students has already produced anticipated results: The children become emotional upon noting the level of difficulty of the items; they cry, fight, run out of the room, or just sit without more than an initial effort. In an auxiliary study we conducted with the available MAT tests in a non-project elementary district, 56 out of 75 such EH children had to be removed from the class of their placement to be tested separately in small groups by an EH or other teacher in order to get any results at all. What can happen at best is that the student makes random guesses at the answers, coming up with a chance score misleadingly greater than that which would be indicated by a careful testing with all items tried.

As reported, the testing for this project (of all three groups, EMR, D, and RC) was done by project personnel of one, two or a very small number of students, with the level of the MAT the teacher said the child could cope with. The results of this study are in part reported by Yoshida (1975, in press) and are restated here together with other results. The tables presented in the Yoshida manuscript (see Appendix F will not be repeated here, but are cited with this summary of findings. Item analyses were conducted on the reading and mathematics subtests scores of the Primary I (PI), Primary II (PII) and Elementary levels of the MAT in order to determine on each subtest: a) the Kuder-Richardson internal consistency reliability coefficient, b) the percentage of students who responded above the mean chance level, as defined by K/A, where K is the number of questions and A is the number of options (Gulliksen, 1950), c) the distribution of item difficulty values, and d) the distribution of point-biserial (PB) correlation coefficients. The data used were the combined test records of 359 EMR and D Subjects.

As already pointed out, each teacher had been presented copies of test booklets for all MAT levels and asked to choose the level most appropriate for the student. Students were then grouped according to the selected level and administered the complete reading and mathematics subtests for that level. The number of students in a testing group ranged from 1 to 6. The standard procedures given in the test manual were strictly followed except for extended rest periods given between individual subtests.

Tables 1, 2, and 3 in Yoshida's manuscript in Appendix F present for each level-subtest combination of the MAT the mean and standard deviation of the raw scores, the Kuder-Richardson reliability coefficients, the percentage of students exceeding the guessing level scores of the subtests, the distribution of item difficulty values and the distribution of PB correlations.

The out-of-level assignment procedure did not appear to lower the reliability estimates significantly when a comparison is made with coefficients obtained on the standardization samples. The publisher reported KR-20 coefficients ranging from .89 to .97 for these subtests at the three levels. Although 12 of 16 KR-20 coefficients here were lower than those of the normative sample, the greatest difference was .07, found in the Reading subtest of the Elementary level, with differences less than .03 being more typical. The KR-20 coefficients ranged as follows: a) PI, .903 to .946; b) PII, .888 to .937; and c) Elementary, .860 to .926. As to random responding by the subjects defined as a score at or below K/A, the percentage of students exceeding that score on any subtest ranged from 82.8 to 99.3. Judged with this criterion, out-of-level testing appears successful in presenting test items to special education students in a way which effectively controls guessing and increases the likelihood of scores based upon how much students comprehend. For most subtests the distributions of the raw scores reinforce this interpretation because the values at two standard deviations below the mean are usually greater than the corresponding mean chance levels, indicating that fewer than 3 percent of the raw scores are expected to be under the K/A value.

The distributions of item difficulty values indicated that most items were neither too easy nor too difficult, ranging between .30 to .70, the usual range given for the optimal discriminability of the items. Although PI contained a majority of items with discriminability values greater than .70, PB correlations for that level and those for the PII and Elementary levels were positive and greater than .20 without exception. The percentage of PB correlations above .50 for each subtest ranged from 15.5 (Elementary, Reading) to 77.1 (PI, Word Knowledge). In short, the items of the three MAT levels were not only homogeneous within a subtest but also discriminated between high and low scores for this group of special education students. Furthermore, inspection of the means and standard deviations of the students on each subtest-level combination does not indicate a ceiling effect. The moderate to high positive PB correlations reinforce this interpretation because on the average to individual items while the opposite was true for students with high total scores.

These results are meaningful because they indicate that the judgments of the teachers were accurate and did not underestimate the test level for this group of special students even though the disparities between the age-grade placement of the students and out-of-level test selected were as great as 10 grades in some cases. However, such variability in a given classroom may lead to some practical problems in implementing this out-of-level testing method. In the case of the MAT and other popular standardized achievement tests, students must be grouped by each level because the levels differ in both administration time and instructions. This condition precludes the testing of all students in a given classroom during a single session. Perhaps students can be assigned to groups on a grade or school building basis. Specific scheduling questions must be answered and solutions will vary according to the realities of each school building site.

MAT Results with RC Students

The above results were determined upon our samples of EMR and D students. We also analyzed the data for the RC students, inasmuch as the same computer procedures for performing the above analyses were available for little extra cost, but primarily because we determined (as shown in Chapter VI) that the RC students were by and large low performing students. Their low level performance was due in part to their being selected from the lower half of the class in which the D student had been placed, in part because D students tended to have been placed with a "slow" regular group.

Because the RC students were "slow," it was of interest to determine the technical findings of testing with the standardized instrument with such students as well as with EMR and D. A series of item analyses were conducted on the reading and mathematics subtest scores of the Primary I (PI), Primary II (PII) Elementary and Intermediate levels of the MAT in order to determine the same data as presented above. The subjects who were administered the Advanced Level were eliminated from the present study because they constituted too few observations for appropriate item statistics. The 188 RC subjects whose test records were analyzed were (18.7% Anglo, 39.0% Black, and 42.8% Spanish-surname); the sex distribution was 62.0 percent males and 38.0 percent females. Their mean CA at the time of testing was 14.71 years (standard deviation = 2.01). No psychometric data were available on these subjects because they had never been tested for special class placement.

Tables 9.1 to 9.5 present for each level-subtest combination of the MAT the basic item statistics. The KR-20 coefficients ranged as follows for each MAT level: a) PI, .725 to .927, b) PII, .895 to .944, c) Elementary, .905 to .950, and d) Intermediate, .882 to .920. Eight of 21 KR-20s from the present sample were greater than or equal to those of the standardization sample (see Teachers Handbook for each MAT level). Of the 13 which were lower, 9 did not differ by more than .07 from the KR-20s reported by the publisher; the median discrepancy was .02. The greatest differences were found for the PI (Word Knowledge, Word Analysis, Math Concepts, and Math Computation) which ranged from .11 to .21. The out-of-level testing procedure appeared in general to yield items which were homogeneous within a subtest.

The distribution of item difficulty values indicated that the proportion of students answering an item correctly was above .70 for over 50% of the items on 10 of 11 subtests for the PI and PII; the items contained in the Elementary and Intermediate levels were more difficult with most item difficulty values ranging from .30 to .70, the range usually given for the optimal discriminability of items. PB correlations above .20 for each subtest-level combination ranged from 57.1 to 100.0. However, the students selected for PI produced more than 20% of PB correlations less than .20 with some negative coefficients for the same four subtests which had low KR-20s. Coupled with the item difficulty values, it appears that students selected for PI were responding to very easy items which did not discriminate between high and low scorers. A close inspection of the means and standard deviations for these four subtests showed that these students were responding near the ceiling level of the test. In short, the out-of-level procedure appeared to appropriately match students with items for PII, Elementary and Intermediate, which were difficult but which discriminated between high and low scorers. The students selected for PI, however, responded near the ceiling of the test which attenuated the ability of the items to discriminate between the students.

Table 9.1

Means and Standard Deviations of the Metropolitan Achievement Test Reading and Math Total Grade Equivalents by Each Test Level for RC Students

	Reading		Math	
	M	*SD*	*M*	*SD*
Primary I	2.552	0.529	2.628	0.706
Primary II	3.423	1.132	3.426	1.184
Elementary	4.295	1.556	4.305	1.367
Intermediate	5.539	1.561	5.703	1.794
TOTAL	3.948	1.587	3.990	1.611

NOTE.--Tables equivalent to 9.2-9.4 for the data on EMR and D students are found in the Yoshida manuscript, Appendix F.

Table 9.2

Summary Statistics of the Item Analysis for Selected Subtests of the Primary I MAT Battery for RC Students

Variable	Subtests N=25				
	WORD KNOWLEDGE	WORD ANALYSIS	READING	MATH CONCEPTS	MATH COMPUTATIONS
Number of Items	35	40	42	35	27
Number of Alternatives	4	4	3	6	2
Mean Raw Score	31.80	35.24	33.40	28.20	21.64
Standard Deviation	3.06	3.55	8.15	4.91	4.34
KR-20	.738	.725	.927	.848	.838
Percentage of students exceeding guessing level scores of test	100.00	100.00	100.00	100.00	88.00
Range of item difficulty values	.64-1.00	.52- 1.00	.48-.96	.24- 1.00	.48-1.00
Percent below .30	0.0	0.0	0.0	2.9	0.0
Percent .30 - .70	5.7	7.5	19.0	22.9	26.0
Percent above .70	94.3	92.5	81.0	74.3	74.1
Range of point-biserial correlations of the items	-.09-.70	-.15-.72	-.07-.85	-.13-.77	-.16-.84
Percent below .20	42.9	35.0	11.9	40.0	26.0
Percent .20 - .50	37.1	42.5	35.7	8.5	33.3
Percent above .50	20.0	22.5	52.4	51.4	40.7

Table 9.3

Summary Statistics of the Item Analysis for Selected Subtests of the Primary II MAT Battery for RC Students

Variable	Subtests N=69					
	WORD KNOWLEDGE	WORD ANALYSIS	READING	MATH CONCEPTS	MATH COMPUTATION	MATH P. SOLVING
umber of Items	40	35	44	40	33	35
umber of Alternatives	4	4	3	5	5	5
ean Raw Score	31.84	26.96	33.04	29.06	24.55	24.55
tandard Deviation	7.13	5.79	9.98	7.90	6.27	7.98
R-20	.910	.857	.944	.914	.895	.926
ercentage of students exceeding guessing level scores of test	100.00	100.00	94.20	97.05	90.43	95.67
ange of item difficulty values	.42-1.00	.43-.95	.42-.95	.29-.95	.17-.97	.33-.92
Percent below .30	0.0	0.0	0.0	2.5	6.1	0.0
Percent .30 - .70	27.5	31.4	25.0	35.0	60.6	21.7
Percent above .70	72.5	68.6	75.0	62.5	33.3	78.3
ange of point-biserial correlations of the items	.00-.72	.15-.67	.21-.69	.23-.71	.30-.74	.34-.67
Percent below .20	2.5	2.9	0.0	0.0	0.0	0.0
Percent .20 - .50	55.0	68.6	34.1	47.5	45.5	25.7
Percent above .50	42.5	28.6	65.9	52.5	54.5	74.3

Table 9.4

Summary Statistics of the Item Analysis for Selected Subtests of the Elementary MAT Battery for RC Students

Variable	Subtests N=63				
	WORD KNOWLEDGE	READING	MATH CONCEPTS	MATH COMPUTATIONS	MATH PROBLEM SOLVING
Number of Items	50	45	40	40	35
Number of Alternatives	4	4	5	5	5
Mean Raw Score	32.97	27.68	23.77	27.98	19.84
Standard Deviation	10.27	9.14	8.34	8.04	10.08
KR-20	.927	.910	.905	.909	.950
Percentage of students exceeding guessing level scores of test	95.23	99.00	99.00	99.00	85.71
Range of item difficulty values	.12-.98	.30-.90	.29-.98	.19-.95	.15-.84
Percent below .30	2.0	0.0	2.5	2.5	2.9
Percent .30 - .70	52.0	66.1	60.0	35.0	82.9
Percent above .70	46.0	33.3	37.5	62.5	14.3
Range of point-biserial correlations of the items	.11-.69	.18-.65	.23-.67	.10-.69	.32-.77
Percent below .20	8.0	2.2	0.0	7.5	0.0
Percent .20 - .50	36.0	68.9	65.0	42.5	14.3
Percent above .50	56.0	28.9	35.0	50.0	85.7

Table 9.5

Summary Statistics of the Item Analysis for Selected Subtests of the Intermediate MAT Battery

Variable	Subtests N=31				
	WORD KNOWLEDGE	READING	MATH CONCEPTS	MATH COMPUTATIONS	MATH PROBLEM SOLVING
Number of Items	50	45	40	40	35
Number of Alternatives	4	4	5	5	5
Mean Raw Score	28.87	23.16	16.97	22.90	17.13
Standard Deviation	9.59	8.34	9.04	8.13	8.16
KR-20	.914	.882	.920	.907	.910
Percentage of students exceeding guessing level scores of test	100.00	93.54	90.32	96.77	90.32
Range of item difficulty values	.12-.96	.09-.87	.06-.80	.19-.93	.12-.83
Percent below .30	16.0	13.3	27.5	27.5	14.3
Percent .30 - .70	50.0	66.7	67.5	37.5	74.3
Percent above .70	34.0	20.0	5.0	35.0	11.4
Range of point-biserial correlations of the items	-.06-.77	-.07-.75	-.28-.73	.15-.72	-.05-.79
Percent below .20	10.0	13.3	5.0	12.5	11.4
Percent .20 - .50	50.0	60.0	52.5	45.0	28.6
Percent above .50	40.0	26.7	42.5	42.5	60.0

The percentage of students exceeding the guessing levels of the various subtests ranged from 85.71 (Elementary, Math Problem Solving) to 100.0 for 7 subtest-level combinations with the median percentage equal to 98.09. Even if the percentages from the four subtests of PI were eliminated because of their ceiling scores, the median percentage for the remaining subtest-levels combinations would still equal 96.22. The teacher's assignment to test level appeared to control the frequency of guessing for this sample of low achieving students.

The results of the present study confirm the conclusions made in the study of the EMR and D students concerning the appropriateness of the teacher judgment procedure for the selection of the test and generalizes its use to groups of regular class low achieving students. For most subtest-level combinations, the KR-20s were comparable with those reported by the test publisher for the standardization sample; the percentage of students exceeding the guessing level of a subtest was very high; the distributions of the item difficulty values and the PB correlations indicated that the test items were on the whole moderately difficult and yet produced an optimal psychometric property of moderate to high positive PB correlations. Taken together, this out-of-level selection procedure was successful in assigning test levels which yielded a reliable instrument to assess academic performance for this sample of low achieving students.

There was one exception to the above results. Teachers appeared to underestimate the achievement level of the students assigned to PI. Their scores on four PI subtests (Word Knowledge, Word Analysis, Math Concepts, Math Computation) approached the ceiling of that test level and a significant percentage of the PB correlations were either low positive or negative. Perhaps teachers who selected PI were attempting to maximize the probabilities for student success, believing the student would obtain a score higher than if the student were assigned a more difficult test level. Although this explanation is feasible, two sources of data argue against it. Only 13.3% of the subjects were assigned to this level; the remainder were given higher levels resulting in excellent psychometric characteristics for these levels. Furthermore, the PI, Reading subtest showed a KR-20 of .927 along with 88.1% of the PB correlations greater than .20. These values suggest that teachers may have selected on the basis of the Reading subtest which requires a more sophisticated skill of comprehending sentences as opposed to matching a word with a picture or perceiving differences in sound blends in the cases of Word Knowledge and Word Analysis, respectively. The students taking this test level were typically in upper elementary or junior high school; vocabulary and word attack skills may have been more mature than reading ability. This discontinuity in the development of verbal skills poses a potential problem for the teacher selection procedure. That is, one may not be able to secure a reliable set of items across all subtests for a single test level. Compromises in the selection of test level may have to be made in terms of what academic skills the school and teacher value the most. Nevertheless, this problem occurred at PI only and for the smallest proportion of students in the sample. In short, the findings of this study reinforce the interpretation made by Yoshida (1975) that the teacher judgment method of out-of-level test selection results in a technically reliable testing instrument which utilizes an already available standardized achievement test.

Auxiliary Study of MAT Testing of Mainstreamed Educationally Handicapped Students

The availability of the MAT test materials together with the efforts of a dissertation student at the University of Southern California (Roberta Kay Nystrom) permitted us to undertake an auxiliary study to investigate some hypotheses which emerged from our own testing of EMR, D, and RC students where we principally had determined the suitability of a teacher-selected level of a test. Having also learned that testing of mainstreamed EH students with the test level of their regular class was giving lots of problems, it was desired to explore a bit further how these problems might be overcome. A large elementary district in southern California which was not in our project provided the opportunity for such exploration.

One plan could not be tried out. That was to compare the testing of the mainstreamed EH student who is tested with his own class using the level suited for that class with other such students who for testing would be put into a grade using a level of the test at their own reading level; for example, if the nominal placement were 7th grade but the student's reading level was 4th, he would be tested with the 4th graders. That however was vetoed as too threatening to the ego of the often tempermental EH students. Note that it is not possible in a usual class-size group to administer more than one level in the same room--with a very small group seated well apart it is sometimes possible to administer two different levels at the same time.

The one possibility we could try involved variation in the size of the group being tested. As indicated above, experience had shown that two-thirds of the EH students could not be tested with the regular class, but had to be segregated into small groups, with a learning disability or EH teacher in charge.

Primarily then this auxiliary study compared student group sizes of two, four, and eight tested students to an examiner (teacher, teacher aide, psychologist, etc.). Groups of such size were randomly arrived at (within some limits) in the schools having fairly large numbers of mainstreamed EH students. The unit of analysis was the size of the group. There were eight groups of each size, 2 students, 4 students, and 8 students (numbers of tested students were 16 + 32 + 64, totaling 112).

Rather than select the test level by teacher judgment, which had already been found satisfactory in the project testing, the method utilized here was otherwise. Law had mandated testing with the Wide Range Achievement Test (WRAT) for all EH students. The subjects here were selected to have WRAT reading levels, corrected for the time of MAT testing, of 2.0 to 4.0 in grade equivalent. The subjects as selected included 24% with Spanish-surnames, no Blacks, 27% female, 73% male (a representative proportion by sex in EH classes). CAs ranged from [illegible].5 to 12.10, the average being 11.4. Examiners recorded student behavior during testing, coding it into the Burks Behavior Rating Scale.

The MAT subtests administered were the Word Knowledge, Word Analysis, Reading, and Total Reading. Data were analyzed twice by means of ANCOVA, using CA and IQ separately as covariates. None of the results for main effects was significant--the expected superior performance of the smallest group size did not emerge. Table 9.6 lists the F tests. It is obvious that there was no variation attributable to group size, in the size range of 2 to 8 students. We infer that the results are better than when the students are tested in groups as large as a class of, say, 25-35 students; we do not have data but the district personnel were quite sure of it.

Inasmuch as the behavior in "normal" testing of such EH students was reported to be a function of how much disturbance occurred, the data of behavior coverted into Burks Behavior Rating total score were also analyzed. Negative correlations (as anticipated) of rather modest magnitude resulted, and are reported in Table 9.7.

The WRAT, individually administered by a school psychologist within a short time period of the MAT testing, provided a validity check on the MAT testing. Correlations are presented in Table 9.7; one was .58, the other three were above .70.

The EH students who were subjects here had been administered either the Cooperative Primary Reading or the California Tests of Basic Skills; this testing was done in a district-wide assessment. The students mostly had to be tested (as we told earlier) in separated groups, for they tended to be distrubed when being tested in the classroom of their regular class assignment. The test results when correlated among each other are presented in Table 9.8.

Of more interest is, however, the comparison of mean grade equivalents secured on the subjects by the different measures. These are:

MAT Total Reading	2.5596
Cooperative Primary	2.9276
California Test of Basic Skills	2.8811
WRAT Reading	3.2223

Below we present information on the MAT testing of these 112 students to indicate that the results can be counted on as good testing, and hence that they provide dependable indicators of the students' reading. We are chagrined that each of the other three tests yielded higher grade

Table 9.6

Ancova Results on Reading in Auxiliary Study of EH Students
Tested in Groups of 2, 4, or 8, with Two Covariates

	Word Knowledge	Word Analysis	Reading	Total Reading
	F	F	F	F
With CA as Covariate	0.326	0.002	0.040	0.487
With MA as Covariate	0.114	0.041	0.347	0.277

Note 1.--The group was the unit of analysis, eight groups of each size.

Note 2.--None of the Fs was significant.

Note 3.--In every analysis the CA or MA Covariate was significant.

Table 9.7

Correlations of MAT Tests with Burks Behavior Rating Total Score and with WRAT Reading in the Auxiliary Study of EH Students (N = 112)

	Burks Total Score	WRAT
Word Knowledge	.28	.75
Word Analysis	.15	.75
Reading	.29	.58
Total Reading	.33	.72

Table 9.8

Intercorrelations of the MAT, WRAT, Cooperative Primary, and California Test of Basic Skills Reading Grade Level Scores for the EH Students in the Auxiliary Study (N = 112)

	WK	WA	Reading	Total Reading	CTBS
MAT Word Knowledge					
MAT Word Analysis	.6745				
MAT Reading	.6694	.5749			
MAT Total Reading	.8878	.6551	.9012		
California Tests of Basic Skills	.5460	.5551	.3023	.4502	
Cooperative Primary	.3807	.2434	.2802	.3480	*

*Only one test was administered to each child equivalents than the MAT. The WRAT, not so well standardized and lacking the precision within a grade level found in the others, is easy to dismiss from the discussion.

The explanation for the higher (rather than the anticipated lower) grade equivalents on the other instruments is not easy to make. One might presume that standardization differences were responsible. The slight differences could not remove the problems inherent in emotionality at testing found when the students were given the test level of the Cooperative or the CTBS of their grade assignment. Inspection of the test booklets indicates that there was a lot of guessing going on, so that the students essentially achieved chance scores. These turned out to be higher than the grade equivalents of the MAT. Arguing the latter are close to the true achievement level of these EH students, we have to conclude that the testing with the level of the test provided the regular class of their placement yields wrong results which are too high rather than too low.

Technical Data on the Use of the MAT with the Mainstreamed Educationally Handicapped Students

Table 9.9 presents information equivalent to that of the Yoshida paper (Appendix F) and to that presented earlier in this chapter on the RC student. The data testify to the technical excellence of the testing. The standard deviations are reasonably large and have a good relation to mean raw scores. The KR-20 reliabilities are excellent. Nearly all students exceeded guessing scores. The item difficulty level values are about as good as one expects with good testing of regular class students, and most of the point-biserial item correlations with total test have good magnitudes. In short, there is every reason to believe that the MAT testing done (with level selected from the WRAT results here; comparable with teacher selected level in the main study) in this fashion gives results giving a true indication of the achievement level of the mainstreamed student. We have to conclude that testing such students with their regular classmates and on the level they take runs severe risks of emotional disturbance to themselves and the class, requiring segregation for testing; and even if segregated, risks the same fate because of the sense of extreme inadequacy, given the difficulty level of the test; and in short, any achievement testing not done in small groups and with a properly selected level runs the risk of misleading results.

Table 9.9

Summary Statistics of the Item Analysis for the Primary II MAT Battery (N = 112)

Variable	Subtests		
	Word Knowledge	Word Analysis	Reading
Number of Items	40	35	44
Percent of Alternatives	4	4	3
Mean Raw Score	24.0	22.8	24.4
Standard Deviation	8.4	6.0	10.1
KR-20	.910	.829	.922
Percent of Students exceeding guessing level scores	95	100	82
Range of item difficulty values	.25-.93	.29-.98	.30-.83
Percent below .30	.02	.03	.02
Percent .30-.70	.58	.54	.82
Percent above .70	.40	.43	.16
Range of point-biserial correlations of the items	.19-.72	.15-.61	.18-.68
Percent below .20	.03	.06	.02
Percent .20-.50	.60	.83	.61
Percent above .50	.37	.11	.37

CHAPTER X

Overview and Discussion

The project reported here is best understood if seen in historic perspective. A century of time has witnessed the lifting, one by one, of categories of children excluded from an educational opportunity either by explicit provisions of the law or because there was no program to suit their needs. The progressive inclusion of unusual learners required a concomitant development of special educational facilities. Those slow learning children later called the educable mentally retarded tended to be early drop-outs from school because of their relatively slow academic progress. Programs of segregated education called "special training classes," "opportunity rooms," and other names were set up decades ago on a minimal basis and only in more progressive school districts. Such programs received vigorous and well-intentioned expansions after World War II in the United States, especially during the Kennedy era in which, regardless of the previous labels employed, all mentally deficient, mildly retarded and borderline learners were grouped under the umbrella of "mental retardation." State after state enacted mandatory or permissive legislation which by and large provided for a multiplication of special classes, special teaching credentials and methods, and financial assistance to the school districts for the extra cost of the programs.

The 1950's and 1960's were the heyday of the EMR movement. However two problems developed. The first was a suspicion about the efficacy of the special class to achieve an academic education for the EMR, especially in consideration of its cost, which was more than twice that of a regular class student. This doubt burgeoned from the late 1960's on. With more impact however was the matter of civil rights. Placing a child in an EMR program constituted assigning an official label, a label which came to be regarded as stigmatizing. It was easy to show that in the public's mind any child labeled retarded even if normal-bodied and adaptive in his neighborhood and playground if not in academic pursuits was associated with the dwarfed bodies and dependent status of the more severely retarded. That is, this effort to provide a "best" education for the EMR student, affording him one aspect of his right to equal protection under the Constitution in a better way than by failing in regular class, constituted from another point of view a deprival of those same rights via the stigma suffered and by being submitted to a curriculum a few cuts below that which his age mates received. Thus one civil rights issue collided with another. To place in EMR, said the court, was to place the person in a "suspect class," to be done only for preponderantly sufficient reasons. In everyday terms, the question became one of whether more harm than good was done by EMR placement.

The question was resolved not scientifically via empirical evidence but on legal grounds. The way it was resolved was through the demonstration of overrepresentation of minority children in the EMR registration total. As California data showed, the Blacks were proportionally represented over four times as frequently as Anglos, and Spanish-surnamed, three times as frequently (Table 5.1). The matter was taken to federal courts on charges of deprival of civil rights by wrongful placement into the suspect class by use of biased instrumentation (intelligence tests based on white middle class culture). The more complex aspects of the placement, including the system factors involved and the lack of empirical support for many of the charges made were not seriously considered; nor was it intended that the courts would be presented the entire picture, for the defendant State Board and the school districts themselves had hoped for change but had failed to secure legislative support. A greater spectrum of flexible and nonstigmatizing alternatives to segregated education was in great need. (It has been unfortunately possible in most states to secure from legislatures extra money only for categorically different, and hence labeled children.)

The courts as a consequence listened to the complaints and ordered a series of changes. This was so not only in California but in other states as well; the effect of course was eventually nationwide. In California the courts mandated reassessment for all students by "unbiased" means and put other requirements upon the schools. The legislature itself enacted such provisions, including the lowering of the maximum IQ for eligibility to special EMR class.

As a consequence somewhere between 11,000 and 18,000 students in EMR classes in California were reassigned to the regular program (a few to other programs) in a period of less than three years. As all who know the schools are aware, the courts by their mandates about relabeling the child did not miraculously cure the learning handicap which took the child out of the regular class and into the special in the first place. It was therefore of paramount interest to determine how the children fared when they returned to the regular program. This interest had a focus beyond just these children: mainstreaming was just becoming a powerful thrust, an idea whose time had come. What could be learned which would be useful for those who had to set up mainstreaming plans?

Procedures. The Bureau of Education for the Handicapped, U.S. Office of Education, funded the project, which then sampled the decertified and non-decertified children of the 1969-1972 period of reassessment in 12 California school districts to determine the current status of the children as well as to look back upon the decertification process. Much might be learned. The 12 districts represented a large metropolis and some medium and small places, those with mixed ethnicities and those with predominantly one or two, sampling in both the heavy population basis of southern California as well as the San Francisco Bay area. A perspective on the whole state had been secured by the sampling.

The study had two major phases. (1) The files were studied for the complete registers of EMR students during the 1969-72 period, except for one district in which the numbers were prohibitively large and where it was necessary to sample from only the current EMR and decertified students; and in two others where for other reasons only the current students could be sampled. This first step led to "purified" lists of students who were subject to the mandated reassessment; those decertified and not decertified constituted the larger picture from which we were able to tell much about how decertification worked, what groups were favored more in the process, etc. Chapter V presents much of this information.

(2) The district total lists then constituted the sampling basis for the second and major phase, the study of current status of the decertified. The plan involved random sampling within sex and ethnic strata from the decertified and non-decertified lists, the determination of those available for current study and those not available (and substudies of the unavailables to determine whether bias had entered), with further sampling to provide sufficient numbers for the current study.

The strategy of the second phase was to secure information on each decertified (D) student in contrast with a non-decertified (EMR) student of his same class or program level and of the same sex and ethnicity; and to secure also comparative information on a regular class (RC) student in the same room and of the same sex and ethnicity as the D student (in secondary schools in English or reading as a rule). Data were secured (a) on the reading and mathematics sections of the Metropolitan Achievement Test, (b) the teacher marks on those subjects, (c) and on citizenship, and (d) other information which could attest to the success of the D student and his contrast matches. Cumulative records were also screened for other data.

The project also secured information from most of the teachers of the three groups of subjects by means of a questionnaire designed to get the teacher's appraisal of the transition program and of the nature of the regular class group in which the D student was placed.

Some limitations on the data of the study. The principal "current status" data were secured in Spring, 1974. Thus the 1969-72 EMR students who were decertified or not, were studied some two to five years after their reassignment to regular class. Whatever conclusion we are able to draw about their success has to be made without our being able to attribute results to kind of program, assistance, emotional support, etc., the students might have received in the period before our current status study. Something might have been gained in a study of process of readjustment during the immediate post-reassignment period. The present study gave the students some time to adjust and hence has the advantage of reporting on a stabilized outcome.

The extreme care with which the schools handle their obligation of confidentiality precluded securing family information (except for one limited set of information as reported in Chapter V), even socioeconomic status. It was therefore not possible to determine the extent to which the parents, themselves a powerful educational agent, contributed to the success of the student. Other data of personal-social adjustment had to be denied us or rendered in variable, undependable forms.

the understandable and mandatory reticence of school officials about the problems of their students; their laudable refusal to enter into the records all that they know, and the laudable practice of elementary schools not transmitting the sordid emotional history with the cumulative record when the child transfers to secondary (or to any new) school. These strictures precluded our securing data in the form of records of truancy, disciplinary actions, personal, peer, or family problems, etc. which would have helped to make a more complete account of the success of the students. As investigators we regretted the denial but as humanists we applauded and accepted the reasons.

The project suffered setbacks which deprived it of certain current status data in two large school districts; in one the assassination of the superintendent led to such internal problems that parent permission for testing could not be sponsored; in the other a prolonged teacher strike led to the same consequence.

Many of the students drawn in the random samplings of students from the 1969-72 lists were not in the same district for the study of current status in 1974. They had to be replaced by further drawings. To what extent did their unavailability matter to the interpretation of the findings? As shown in Chapter VII, there was no evident systematic bias in terms of the variables available from the files for comparing the available with unavailable cases: age, sex, IQ, ethnicity (except for certain disproportionate unavailability of Anglo children in places undergoing ethnic change in housing) and in other variables. Whatever small differences obtained appeared to be district-specific without relation to the main variables of interest. It was judged that the unavailability of the sampled students did not produce any bias on the findings of current status.

Summary and interpretation of the pre-decertification information. Chapter V and certain tables in Chapter IV have presented basic information on the nature of the children subject to the mandatory reassessment, the result of which was the progressive decertification of up to about 45% of the eligible EMR registration in the 1969-72 period and their reassignment to other programs, primarily to regular class, with or without transition assistance. One question asked was how the decertification worked with respect to the initial problem, that of the large overrepresentation of ethnic minority children in EMR which lead to the civil rights litigation mentioned above.

In general, the decertification process with the mandated new instrumentation and the lowered IQ cut-off reassigned proportionally more minority children and more males than Anglos and females, respectively. But one saw in both our data and in state-wide data (Tables 4.3, 5.1, and 5.3) that the reassignments did not fully "correct" the problem of ethnic minority imbalance in EMR. Let the Los Angeles Times (editorial, May 1, 1974) tell the story:

> California's public schools have apparently made little progress over the past five years in reducing the abnormal number of black and Chicano children who are placed in classes for the mentally retarded.

> Minority representation in such classes is still two to three times their percentage of school population, despite state laws to correct the imbalance that went into effect in 1970.
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> But the state evaluation of educators' response to the 1970 regulations points out that there is no legitimate reason to believe that the actual rate of retardation among blacks and Chicanos should run two or three times higher than among Anglo students.
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> To be classified as mentally retarded can stigmatize children for life. They are thought of as inferior by their peers, and develop low images of themselves. Many are afraid to return to regular classes even when they have the opportunity.
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> However diligently the schools have been trying to comply with state regulations, it seems to us that a greater effort can and must be made.

The continued disporportion caused continued litigation in the Larry P. case which to this date (November, 1975) is not yet settled, and has had at least two consequences. One is the prohibition of the use of any intelligence tests and the IQ for identifying students for EMR placement--this for all ethnic groups. The effect of this was mixed, from a system point of view. As pointed out in Chapter III, the psychologist had often employed IQ as a means of dissuading the school officials from making an EMR placement; psychologists now are complaining in some districts that the officials are making placements they (the psychologists) do not believe justified; they cannot test to ascertain eligibility.

The second effect of continued litigation is the cumulation of a new kind of child of special concern. The continued overrepresentation of the ethnic minority children in EMR (in districts which have mixed ethnicity) has prohibited the placement of further children of the overrepresented groups till there is room in the quota. Considering that the children on these waiting lists have met the new, more severe criteria and considering that the schools are conscious of the likelihood of lawsuits including personal suits for damages, one concludes that the unplaced children on the waiting lists are truly in severe need of some special educational assistance; but they are not likely to get it in these times of severe budget stress. The authors of this report consider this California situation grievous; it is not sufficient to hope for a more complete development of mainstreaming to solve all the problems; the tentative start of mainstreaming is 11 funded and is in risk of contraction rather than expansion. One hears statements that this "over quota" problem has developed in other places but we have no supporting information for other states.

Another follow-back question addressed in Chapter V was the search for factors in pre-decertification histories of the EMR students which might forecast their eventual decertification. Were there any predictors?

The question assumes importance because there was not much difference in IQs taken at the time of initial EMR placement between the D and the non-decertified EMR group. In Chapter V we were able to conclude that, given the guideline IQs of the time of placement, the placement of most of the group which eventually was decertified looked just as valid as the placement of the group which was retained in EMR. What else could be found? We sought for answers in reading and math marks in regular class before EMR placement, we looked for mentions of personal-social adjustment made by either teacher or psychologist at EMR placement, for citizenship marks both in regular class and in EMR. Little was found to discriminate the future D from the EMR group across those districts in which there was sufficient information. Where a significant difference favoring one would occur, a difference favoring the other would be found in another district. Discriminant function analyses indicated some merit in the combination of IQ at EMR placement with reading marks; altogether there was not much improvement over chance. Adding sex would help a trifle also. In general the conclusion attained in Chapter V was that the identification of later D status through bad psychometrics or inappropriate referrals at the initial EMR placement was not seen. To have expected such was perhaps natural to one who takes an essentially deficit or medical model approach which expects there to be some set of determinable characteristics which truly differentiate the morbid from the well, the EMR from the normal. Some will recognize the old "pseudo retarded-truly retarded" fallacy with its disregard for the continuity which obtains in this kind of situation and with its disregard for the fact that case identification is a system phenomenon to start with rather than a clinical one. (This paragraph does not deny that in a few specific districts the school administrators did indeed cause some EMR identification to be accomplished only by means of psychometric screening, a practice rejected of course by ethical psychologists.)

The conclusion of Chapter V, then, was that the early determination of EMR status, given the official guidelines of California at the time, was apparently as valid for most of the children later decertified as for those not decertified. The argument was carried further, adducing the instability of IQs as shown in growth studies, some increasing with time, some decreasing. It was therefore considered possible that the EMR students later found to be ready to try regular class, our D subjects, grew enough to change categorical status, while the others did not. None of this argument, it is again stressed, claims that to be EMR and segregated at any stage is necessarily the best placement for the student, but the argument does assume that alternatives other than an unassisted registration in regular class have to be developed and proved before anyone can contemplate the termination of all segregated EMR education.

Granted that some project children "grew" mentally while others did not, were there correlates of such growth? Some speculation was made, on insufficient data, that home stimulation factors might have been involved. One conclusion, however, can be made with some firmness, namely that just as the longitudinal growth studies of "normal" children show no very great long term stability of mental status as indicated either by IQ or by achievement in school, no one should expect IQ or other cognitive stability in the children identified for special education as EMR or any other program; statuses do change even if we do not know all the reasons why. This suggests placement and special education should be made and should be funded for specific and current educational need rather than for categorical diagnosis of an allegedly chronic deficit condition.

We briefly review from Chapter II and III another point or so respecting the legal vs. empirical resolution which was effected. One point, the one on which the entire project rested, was that the act of a court does not in itself change the slow learner into a normal learner. Data summarized in Chapters VI and VIII are testimony to that. Another is that the schools, deprived of alternative provisions for special education, actually had sought remedy, becoming defendants turned amicus, as in other current civil rights litigation for the right to treatment and education. For those to whom this is a surprise, the lawyers point out that courts are passive, considering only the charges and the evidence placed before them. Thus there was no review in court of the empirical data on charges of self-fulfilling prophecy, biased testing, system process, educational need and the like. There was no occasion to instruct the courts about the simplistic medical model concepts of "retardation" held by the public generally and presented to the courts, nor to disabuse the court of the awesome respect many hold for the IQ and its powers, and in terms of which the litigation was presented, nor to consider the ultimate "validity" culprit, if there must be a culprit, the Anglo-centered middle class school curriculum.

We later conclude that the decertification was a partly good thing, altogether, its good consequences outweighing its bad, but we cannot escape saying it was done for some essentially irrelevant reasons.

Main Results

Based on MAT, teacher marks, and citizenship, Chapter VI showed an almost monotonous order of means of MAT scores in which RC was highest, D second, and EMR third. There tended to be more difference between EMR and D than between D and RC. There tended to be either a sex difference as a main effect or in interaction with ethnicity, or both. Females tended to exceed males, especially among Black students. Other than the sex difference in Black students there was rarely a significant main effect difference for ethnic group. Teacher marks tended to show the same results (EMR not being compared because the basis for fair comparison did not exist). RC was higher than D but not quite so much as with the measured achievement on the MAT, and females tended to get marks superior to those of males, especially among Blacks, but sex differences were more pronounced for teacher marks than for measured achievement, as is commonly found. In math marks, fewer differences between RC and D and between males and females were found than in reading. Also for math marks, significant interactions were absent. In Chapter VI we speculated that the perception of mathematics as a masculine discipline might have had an effect.

Reading and math citizenship marks showed some sex difference, females higher as a rule. Both this result and some ethnicity differences were mixed and defied easy interpretation. Post hoc comparisons did not always clarify the results.

Our data have shown that the worst fears were not realized nor were the best hopes. Achievement data for the average D subject was below that of his matched never-EMR classmate of the same sex and ethnicity, but above EMR students of the same age, sex, and ethnicity. The mean achievement was several years below actual placement; they did not become "average" students. The achievement nevertheless showed educational progress being made and so did the teachers' marks of achievement and citizenship. We were unable to secure data which (reflecting on the drop-out problem mentioned earlier) tended to show that there was a community adjustment problem in those not in school. One suspects that the noises one hears about decertified drop-outs are no more serious or frequent than those about regular class drop-outs of the same SES, sex, ethnicity, and neighborhood.

In fact, what was evident in the data of Chapters IV and V (and discussed in the latter) was that the availability of D students for the study of current status was somewhat greater in most project districts than the availability of the EMR students. Those who were available had not of course dropped out; those who were unavailable might not have dropped out but the proportion who had was almost surely greater than for the D group. Using this one criterion alone, decertification appears to have been a moderately good event for the D group.

This conclusion, that decertification was a partly good thing, is meant just for the D students. Should it be applied to the non-decertified? Had they been reassigned would they also have succeeded? It must be kept in mind that they were not decertified during a period when there was every good political reason to do so; they were not reassigned, primarily on bases of reassessment IQs, tempered by judgments of the committees charged with making a decision. We believe, therefore, that decertification would not have been a good thing for most of them.

Besides the achievement data represented in the MAT scores, and the teachers' marks for both subject matter and citizenship, it was also possible to show a crude index of general social adjustment based upon the logic that a student of compulsory school attendance age who is in school is meeting the fundamental demand of his age group. Thus in Chapter VI was the four-step criterion based upon our knowledge that the student was in school or had graduated; or had dropped out or was of unknown status but not transferred; or otherwise. This was done for the eight school districts in which there was total re-creation of the 1969-72 EMR lists from which we could make sampling. By study of cumulative records or attendance files and by other efforts we secured the information which led to the comparison of the D and EMR students on this basis. There was some superiority of the D students over the EMR by this criterion. This was so in two different treatments of the data, as shown in Chapter VI and in Table 6.27. Even to the extent the findings were less certain in some districts than in others, the total impact of the data is that decertification did not cause students to leave in greater numbers than the non-decertified.

We have already commented that other criteria of success, such as absence rate, rate of getting into difficulty in the community, and the like, evaded our search, because districts either did not choose to keep records, or destroyed such data on principle so as not to carry a student s bad reputation in the records; and also because they tended to be chary about letting people, even their own employees hired to assist us, search into records.

The overall success data reported here in contrast with some hearsay and with some individual district reports on transition programs. A motivation to undertake the study, in addition to the vast natural laboratory which forced a sudden conversion into forms of mainstreaming efforts of those recently in segregated education, was in the form of hearsay of all variety. Item: A Black counselor in a largely Black High School, when the conversation in a graduate class touched upon transition programs in California, said approximately this: "We have a couple of them in death row in San Quentin." Upon being questioned, he indicated that some decertified students in his school could not cope with regular class in spite of transition help and dropped out. Two of them got into such mischief as to lead to conviction for murder. He judged that the difficulty in coping with regular class was contributory to their early leaving of school.

Item: An entire area of a certain rural county merely dropped all EMR programming rather than run it for the few who continued to meet guidelines. They judged that there was no way they could secure enough money to operate through the extra cost formula without severe loss. Inasmuch as there was no grave opposition on the part of the public or the parents, nothing was done about what amounted to an actual breach of their legal obligation to provide an EMR program for the area.

Item: Stories about decertified students dropping out at alarming rates when confronted with regular class responsibilities were heard here and there around the state, especially in certain districts which had programmed for EMR only with great reluctance and much prodding. The stories included affirmations that the districts would have nothing to do with the transition programs; they did not believe they were worth the money to set up.

Item: Many of our project districts (we have already pointed out) simply did not renew their transition programs with the interruption of state money occasioned by the flaw in the law which caused a shutting off of money till the legislature could meet to re-enact the transition provision. Their argument was that to renew would cost more than they would receive and that the students had already had a year or so of help.

The kinds of stories are balanced against sincere and helpful efforts to assist the decertified students, sometimes over and above what was paid for by the state formula for assistance. These stories were just as abundant and were a lot easier to find out about, for such districts were proud of their records when asked about them. We cannot say in the net analysis whether more places helped than did not help; how long they helped with transition programs, how long it took to tool up, how soon they terminated, would confuse any answer. We are able to say that all varieties of good programming report were found as well as some of neglect. In general the story of neglect tended to be heard about outlying districts with scattered enrollment and like occasional bad news, was more celebrated than the good.

Evaluation of the California transition program. It had been hoped that the study of the various programs by which the D students were assisted upon their return to regular class might be useful for mainstreaming generally. In California what was called the "transition program" permitted great latitude in what a district could do--it was as open-ended as any designer could have wished, and the prospects of comparing forms of help were relished. Our hopes were dashed early, as personnel of district upon district told us that they let the school principals do what they wanted, within certain limits. But then some district personnel tended interpose barriers which precluded adequate pursuit of the information, as though they did not want people to find out much. Further, districts modified and mixed their transition activity, and often people had to speak of it in the past tense as something which happened for a while but terminated a year or so before our contacts, particularly when transition funding had been interrupted. One gathered the impression they were not always proud of what in the nature of things had to be set up hastily.

As an appraisal of mainstreaming, then, via the study of the transition program, we are able only to state that mainstreaming of these former EMR students did indeed work by the criterion that there were not wholesale droppings out of school; we found no data to sustain charges of "push out" even if we were aware of specific instances which occurred. By the criteria of the achievement measures and marks awarded by teachers, the students were apparently surviving and learning nearly as well as the never-segregated regular class match cases. In that sense whatever was done had to be deemed successful; one must keep in mind that some D students had experienced no transition help at all, and perhaps some did not need it. It was known in specific and limited instances that they disdained such help, wanting to be dissociated from anything "special."

In terms of whether teacher aide models were superior to resource room and resource teacher models, the project could produce no data. The project could not give any answers about the instructional assistance, special methods or materials, etc., which were regarded useful, nor even tell whether a given kind of model was used more for one kind of level or district than another.

Standardized achievement testing with mainstreamined students. The project led to some fortunate development of expertise in the application of standardized achievement tests to the measurement of educational attainment of the mainstreamed student. As the country mainstreams more and more marginal or handicapped learners, the "normalization" of their education will include treating them in the same way as others, and this includes giving them the same assessments of achievement. Therein lies a problem not fully anticipated by those who have pushed for mainstreaming. Currently, as in California, the attempt to give the same level of test to the mainstreamed but learning handicapped as is provided his regular classmates has led to disastrous results, for the reading level of the student may be two, four, as much as eight or more grades behind his placement. Furthermore, he has not had repeated practice in the taking of the group tests. It is repeatedly found that the student becomes emotionally disturbed and frustrated by the level of questions and problems in the level of the test given the class; he quits, cries, or runs out of the room and perhaps the building. In any case no good testing can result and his emotional state is not improved. It is necessary to test such children in very small groups in order to keep them at the tasks, and what results tends to be a so-called chance score, one resulting from making a guess as the basis for some choice among multiple choice options.

To send the student down to a class at his reading level during district-wide or school-wide assessment is vetoed on grounds of profound insult to the student. It is generally impossible to give different levels of the test in the same room. In our study our research assistants tested individuals or very small groups with a level of the test selected by the teacher as suitable for the subject, a level which was always somewhat below his placement. That led to a body of data on the Metropolitan Achievement Test on such decertified former EMR students showing that the testing was in all technical steps competent (the data are reviewed in Chapter IX) and that the testing done that way leads to results considered dependable.

We were able at the same time to pick up further information with such "out of level" testing. The data on the regular class matches were based upon what turned out to be a sample of slow-normal learners. Again the technical competence of the testing was outstanding. What such results point to is that if it is possible to segregate the mainstreamed student for testing, better testing can result through use of teacher selection of the level. The second study was a dissertation assisted by our project in which level was selected (this time not for former EMR but for mainstreamed learning disabled students) by use of the Wide Range Achievement Test. Again good testing resulted in terms of technical criteria of range, ratio of mean to standard deviation, Kuder-Richardson reliabilities, etc. There were no throwing away of test booklets and pencils, running from the room, etc.

Our recommendation, then, if mainstreamed handicapped learners are to be achievement-evaluated by standardized test means, is that districts preclude feckless testing with the rest of the students in favor of small-group testing with a teacher-recommended out-of-level version of the test. But we raise a large question, namely whether such testing will give a bad reputation to mainstreaming by those who have expected mainstreaming to be a panacea. Our results as shown in Chapter IX are that we got technically good testing, but we did not show either our decertified students or our regular class matches or the separate group of learning disabled to be "at level" in measured achievement. That is to say, one must never lose sight of the fact that individual differences are a fact of school life and that mainstreaming will not erase comparative deficits which have brought about special identification to start with.

A second caveat is that to do standardized achievement testing would seem to place undue emphasis upon whatever is measured as the principal outcomes of the educational program. If one "normalizes" by mainstreaming, should he however abandon the previous priorities for handicapped learners in terms of attaining good adjustment and self-concept, occupational competence, etc.? This again is a philosophic question but one implicit in the entire process.

Final conclusions. (1) California's decertification of EMRs, occasioned by civil rights complaints, resulted in the reassignment, mostly to regular class, of about 45% of the EMR registration of the 1969-72 period. The guidelines for removal from EMR (and for all new placements) corrected ethnic imbalance only partially, resulting in ethnic quotas for further placement and in temporary banning of placement by means of psychometrics.

(2) Studies of the initial EMR identification of the decertified in contrast with the non-decertified students failed to reveal any systematic bases by which to predict which students would grow to the point they would be replaced into regular class at a later date. There was no significant difference in duration of regular class before EMR placement, age of placement, behavior problem mentions, etc. The decertified did tend to have a slightly higher average IQ at initial EMR placement, to be minority in status, male, and have slightly higher mean reading evaluation by the regular class teacher in some districts; but all these taken together did not yield a promising formula for prediction. It was believed that the initial EMR identification was just as valid for most decertified students as for those not decertified later. Child development factors, possibly stimulation at home or even in the EMR class, perhaps caused some to grow to the point that decertification would be possible. Because these D students succeeded somewhat in the regular class reassignment does not in itself mean that the EMR period they had was for them a bad thing; it is equally possible to argue that the EMR placement was what helped the 45% improve to the place where they could be judged worthy of reassignment.

(3) The decertified students succeeded in the regular class on the criterion of having reading and mathematics scores not too much below their regular class matches, their distribution of scores well overlapping those of the regular class matches. There was more negative discrepancy in their reading as measured by standardized achievement testing than in mathematics and more by such measurement than by teacher judgment in the form of academic marks. However, the reading and mathematics grade equivalent scores were on the average about four or more grades below actual placement; the regular classes into which they were put

were "slow" classes, as judged by the teachers, and the regular class match cases, picked to be in the lower half of such classes, also tended to be well below placement in measured achievement. The interpretation of the achievement test data, as Chapter V brought out, must be made in consideration of the fact that both the decertified and regular class match students were "overage" for their grade placements, as judged on an annual promotion basis. The decertified were about one and one half to two years over, about a half year more than the match cases. Thus the achievement deficit is to be considered for both groups a bit more severe than the mere deficit in grade placement scores only.

(4) The decertified students were also seen as reasonably adjusted by the personal-social criteria of teacher marks of citizenship, absence of evidence of serious dropping out, and an availability for current status study two to five years after reassignment in greater proportion than the non-decertified EMRs of the same period. There was no substantiation by dependable data of the rumored large numbers of drop-outs or push-outs, though such were known to have occurred here and there; the incidence may not have been greater than for age-peers of similar subcultural status and similar low achievement.

(5) The proportion of decertified students who enjoyed one form or another of "transition" help could not be determined, and in general it was not possible to obtain precise information on what methods of assistance were employed, for how long, etc., districts speaking of it mainly in the past tense and in only the most general terms, save for some specific programs. Most commonly employed were teacher aides and resource teachers, sometimes in combination.

(6) Teachers of the decertified students appraised the transition program in a similar way. By and large it was something most did not directly experience except for extra information on students, while some did not even know that they had a "transition" student in class. On the other hand teachers by and large reported experiencing no particular problems with the decertified student; only 29% were able to detail the extra steps they had to take to accomodate him, specific assistance otherwise not needed in the class Only a few reported that the student was disruptive.

(7) The EMR teacher's appraisal of the D student in the transition program was surprisingly less optimistic than that of the regular class teacher who had the responsibility for the student. Their appraisals of the D students' adjustment and success were in fact pessimistic. They also noted that decertification removed from class their own best helpers.

(8) The regular class teachers were by and large aware that the D student was a marginal scholar, tending to be a slow learner in an otherwise slow class, and achieving at a level below the regular class match case, about whom they were also asked. The teachers judged the social acceptance of the D student to be on the average a little below average, but the total of indications showed a complete range from highest

social acceptance to very low, a distribution not greatly different from the equivalent rankings given to the regular class match cases.

(9) If mainstreaming is to include standardized achievement testing, the type of special student represented by the decertified will not be properly assessed if given the same test as his classmates; in fact he will tend to create an emotional scene. Testing in small groups, separately from the others, and with a teacher-selected level of the achievement test, is recommended.

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